Technology

A REMINDER to the wood pulp using industries that the Pacific Northwest is a perpetual source of rapidly growing pulpwood . . . This 24-inch Western hemlock is 34 years old and grew 14 inches in the first 20 years.

PACIFIC Pulp & Paper INDUSTRY

Vol. 14 • No. 3 MARCH 1940

WEST COAST HEMLOCK PULP

HARVESTING of mature virgin timber for lumber and Weyerhaeuser bleached and unbleached sulphite pulp requires the planned projection of new track for the logging railroad.

PULP DIVISION ♦ WEYERHAEUSER TIMBER COMPANY

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Pulp Imports From Europe Continue on High Level

Total imports 2.6% higher in January than December—Imports from Finland decline 7% from December but are 54% higher than November—Pulp from Sweden increases 25%—Norwegian imports up 1%—Canadian down 14%.

SINCE war broke out in Europe the monthly pulp import figures have been of more than ordinary interest to the pulp and paper industry. Those who overlooked the necessity of the Scandinavian countries to maintain their exports, immediately predicted that our imports of wood pulp would be drastically curtailed if not cut off altogether. Some, having only a temporary speculative interest in the American pulp industry, hoped that imports would be eliminated and a boom developed in the securities of domestic producers.

But the manufacturers themselves didn't want a boom and they still don't want it, for an unsound rise in prices would be certain to be followed sooner or later by a drastic decline.

So far the boom has fortunately not materialized. The American producers of pulp are receiving all the orders they can handle and at a price fair to both seller and buyer. Three factors are responsible for this present busy period.

The first is fear. The paper mills that buy all or part of their pulp have placed their primary orders with domestic mills, their secondary orders with Canadian pulp mills and if they could not obtain all they wanted from these two sources they have placed the balance with the Scandinavian countries. This is a reversal of the practice followed by many buyers prior to the war. Fear of imports being reduced or cut off by the war brought the business to American mills.

The second factor is price. Due to the risks of shipping across the Atlantic ocean freight and insurance rates have risen. Costs of production in Sweden, Norway and Finland have gone up rapidly. These together have increased the delivered prices of foreign pulp in the United States to a point above the domestic prices. It is now cheaper to buy American pulp. Just last summer the market was shot to pieces by unsettled foreign prices. Now the Swedes are complaining about the low American prices. The shoe, long pinching the American foot, is now hurting the Swedes.

The third factor is the rapid increase in American paper production in the last four months of 1939. This boosted the year's total production of paper and board to a record level of 18 per cent above 1938 and 3 per cent over 1937. This meant more pulp was consumed, preventing the increased imports from adversely affecting American pulp producers.

Another boom deterrent is the decline in paper production since November's high point. This has had a steadying influence on pulp prices. In November the American Paper & Pulp Association's production ratio report stood at 97.2 per cent of rated capacity. December dropped to 91.1 per cent and January moved a bit lower with 90.6 per cent. February continued the downward course to 86.1 per cent. The preliminary figure for the week ending March 2nd was still lower at 81.1 per cent. No one wants to see a decline below 80 per cent for that would mean considerable unemployment was developing among the paper mills.

The future of the pulp market remains uncertain. As long as the war continues the market will undoubtedly continue to be strong, but peace in Europe will bring weakness and possibly chaotic conditions as the pulp and paper industry has, as yet, no means of protecting itself against imports from depreciated currency countries. A combination of depreciated Scandinavian currencies, peacetime trans-Atlantic freight and insurance rates and a strong desire on the part of the Swedes, Norwegians and Finns to dominate the American pulp market, would be too much for domestic pulp producers to withstand. The paper market would follow the pulp market into confusion.

(Since the above was written, Finland and Russia agreed to peace terms on March 13th. The settling of this war should not exercise any effect upon pulp exports from Finland to the United States, for they

COMPARISON OF WOOD PULP IMPORTS

December, 1939, and January, 1940

Type of Pulp.	Finland		Norway		Sweden		Canada		Total All Countries	
	Dec. '39	Jan. '40	Dec. '39	Jan. '40	Dec. '39	Jan. '40	Dec. '39	Jan. '40	Dec. '39	Jan. '40
Mechanical Unbleached	1,699	1,118	56	.....	7,606	5,398	21,104	12,683	30,465	19,199
Unbleached Sulphite	11,603	17,583	929	1,505	58,182	56,133	15,505	13,397	87,638	91,392
Bleached Sulphite	7,263	5,909	6,402	5,785	5,871	11,760	25,905	25,103	46,215	48,887
Unbleached Sulphate	22,465	15,972	2,710	2,946	38,342	55,562	5,279	4,878	78,493	79,358
Bleached Sulphate	2,124	1,303	.....	.....	5,108	15,258	4,134	5,444	11,366	22,005
Soda	.....	.....	.....	.....	.....	.....	1,281	1,330	1,281	1,330
Total	45,154	41,885	10,097	10,236	115,109	144,111	73,208	62,835	255,458	262,171
Per cent of change from previous month	+66%	—7%	—36.7%	+1%	—22.7%	+25%	+02.4%	—14%	—6%	+2.6%

Source: U. S. Department of Commerce, Bureau of Foreign & Domestic Commerce.

are, as has been pointed out, already far higher than during the pre-war period. However, the peace agreement does remove some of the uncertainty and alleviates the concern felt among pulp buyers that Sweden and Norway might be drawn into the Finnish-Russian war and cause reduction or elimination of their pulp exports. However, there still exists the possibility that Sweden and Norway may later be drawn into the conflict between the Allies and Germany, although even this danger is not as great as a few weeks ago due to Germany's recent announcement that she would no longer attack neutral ships unless they were being convoyed by Allied warships. A degree of uncertainty over the Scandinavian pulp situation remains.)

The Import Record to Date

● Imports of wood pulp into the United States increased 6.5 per cent in September over August despite the war's interference with shipping. Preliminary import data shows that 160,417 short tons of wood pulp valued at $5,880,141 came into the United States in September. Although this was 6.5 per cent larger than the August imports it was 1.6 per cent less than the imports in September, 1938.

The increase in the total imports was due to a 52 per cent increase in imports from Canada, to 68,356 short tons, over the August imports from that country, and to a 14 per cent increase in imports from Finland which amounted to 33,641 short tons.

Decreases were recorded in pulp imports from Sweden which declined 19 per cent from the August totals to 53,724 short tons in September; and also in the imports from Norway which were down 42 per cent below August with 4,202 tons.

During September 49,145 tons of unbleached sulphite pulp were imported from the following countries: Finland, 13,417 short tons; Norway, 1,111 short tons; Sweden, 22,297 short tons; and Canada, 12,307 short tons.

In the same month bleached sulphite imports totaled 39,785 short tons of which Canada supplied 26,018 tons; Sweden, 3,217 tons; Finland, 7,531 tons, and Norway, 2,538 tons.

September unbleached sulphate imports totaled 38,876 short tons of which Sweden supplied 22,111 tons; Finland, 8,963 tons; Canada, 7,249 tons, and Norway 553 tons.

Bleached sulphate imports amounted to 8,087 short tons of which Canada supplied 4,668 tons; Sweden, 2,795 tons, and Finland, 634 tons. All of the 950 tons of soda pulp imported during the month came from Canada.

Unbleached mechanical wood pulp imports aggregating 23,574 short tons, came chiefly from Canada, that country shipping 17,164 tons. Finland supplied 3,096 tons and Sweden sent 3,314 tons.

● Wood pulp imports in October increased materially over those of preceding months. As a matter of fact, while imports increased 6.5 per cent in September over August, October imports from Finland, Sweden, Norway, and Canada rose over September by 34.7 per cent.

October imports of pulp from Sweden amounted to 88,561 tons of pulp, an increase of 52 per cent over September. Those from Canada increased 10.1 per cent to 75,255 tons. Imports from Finland dropped 15.9 per cent to 28,281 tons, while those from Norway showed the big rise of 259.5 per cent. The total imports were 216,142 tons from these countries as compared with 160,417 tons in September, an increase of 34.7 per cent.

● Wood pulp totaling 272,049 short tons and valued at $9,812,469 was imported into the United States in November, 1939, against October imports of 216,142 short tons and September imports of 160,417 short tons. The November imports were 25.8 per cent greater than those in October and October imports were 34.7 per cent higher than September's. September imports were up 6.5 per cent over August.

The November wood pulp imports were 52 per cent larger than in November, 1938, when the total was 172,731 short tons. The increase was 89,805 tons.

A comparison of the November pulp imports by countries shows that: Finland supplied 27,190 tons in November, 1939, against 29,007 tons in November, 1938, a decrease of 6 per cent; Norway supplied 15,956 tons against 8,249 tons, an increase of 93 per cent; Sweden supplied 148,960 tons against 93,507 tons, an increase of 59 per cent; Canada supplied 70,430 tons against 41,968 tons, an increase of 67 per cent.

● Wood pulp imports into the United States from all countries during the month of December, 1939, totaled 255,458 tons, valued at $8,546,741. This is a decrease of 6 per cent from the November, 1939, imports amounting to 272,049 tons and 18 per cent more than the October, 1939, imports which totaled 216,142.

Comparing United States wood pulp imports by countries for the month of

COMPARISON OF WOOD PULP IMPORTS

November and December, 1939

Type of Pulp	Finland		Norway		Sweden		Canada		Totals All Countries	
	Nov.	Dec.	Nov.	Dec.	Nov.	Dec.	Nov.	Dec.	Nov.	Dec.
Mechanical Unbleached	2,470	1,699	.....	56	3,984	7,606	15,653	21,104	22,163	30,465
Unbleached Sulphite	8,842	11,603	3,177	929	59,547	58,182	14,085	15,505	90,304	87,638
Bleached Sulphite	3,353	7,263	9,272	6,402	9,258	5,871	30,697	25,905	53,492	46,215
Unbleached Sulphate	12,379	22,465	393	2,710	68,181	38,342	4,700	5,279	92,659	78,493
Bleached Sulphate	2,124	2,124	.....	.....	7,990	5,108	4,150	4,134	12,286	11,366
Soda	.....	.....	.....	.....	.....	.....	1,145	1,281	1,145	1,281
Totals	27,190	45,154	15,956	10,097	148,960	115,109	71,430	73,208	272,049	255,458
Per cent of change from previous month	—3.85%	+66%	+5.61%	—36.7%	+68.2%	—22.7%	—5%	+02.4%	+25.8%	—.06%

Source: U. S. Department of Commerce, Bureau of Foreign & Domestic Commerce.

December, 1939: Finland supplied 45,154 tons in December, 1939, against 29,007 tons in December, 1938; an increase of 55.6 per cent; Norway supplied 10,097 tons against 8,249 tons, an increase of 22.4 per cent; Sweden supplied 115,109 tons against 93,507 tons, an increase of 23 per cent; and Canada supplied 73,208 tons against 48,000 tons, an increase of 52.5 per cent. Total imports from these four countries, Finland, Norway, Sweden and Canada amounted to 243,568 tons for the month of December, 1939, showing an increase of 36.2 per cent over the December, 1938, imports amounting to 187,763 tons.

The 45,154 tons of wood pulp shipped from Finland to the United States during the month of December, 1939, shows an increase of 66 per cent or 17,964 tons more than during November of the same year, when the imports totaled 27,190 tons. Norway's wood pulp shipments to the United States during December, 1939, amounted to 10,097 tons, 36.7 per cent less than the November, 1939, imports amounting to 15,956 tons. Sweden shipped 115,109 tons of wood pulp to the United States during December, 1939, a decrease of 22.7 per cent from the 148,960 tons shipped during November, 1939. The imports of wood pulp from Canada during December, 1939, amounting to 73,208 tons showed a 2.4 per cent increase over the 71,430 tons imported into the United States during November, 1939. Imports of wood pulp totaling to 243,568 tons were shipped into the United States from Finland, Norway, Sweden and Canada during December, 1939, a 7 per cent decrease from the November, 1939, imports from the same countries which amounted to 262,563 tons.

United States imports during December, 1939, from Finland amounting to 45,154 tons, were 16,873 tons more than the October imports from that country amounting to 28,281 tons. This is an increase of 59 per cent. Norway's imports during December, 1939, totalling 10,097 tons were 5,011 tons less than the October imports amounting to 15,108 tons, a 33 per cent decrease. Sweden imported 115,109 tons during December, 1939, 26,548 tons more than during the month of October when 88,561 tons were imported, an increase of 29 per cent. Canada supplied 73,208 tons during December, 1939, 2 per cent less than the imports during October which amounted to 75,255 tons. The total imports from Finland, Norway, Sweden and Canada during December, 1939, of 243,568 tons were 36,363 tons more than the total imports from these four countries during October, 1939, an increase of 18 per cent.

During the year 1939 wood pulp in the amount of 1,977,973 tons came into the United States. This is 22 per cent more than the wood pulp imported during the year 1938, which totaled 1,603,845 tons.

January Pulp Imports Above December

● Imports into the United States of wood pulp during January rose 2.6 per cent above December's imports but were 3.4 per cent under November's total.

During January, 1940, a total of 262,171 short tons of wood pulp was imported as compared with 255,458 tons in December and 272,049 tons in November.

Finland supplied 41,885 tons, a decline of 7 per cent, from the 45,154 tons shipped to the United States in December. But the December imports were 66 per cent above the November Finnish total of 27,190 tons, a relatively normal monthly importation from that country. Hence, the January imports from Finland were 54 per cent larger than November's or that much greater than normal. Far from being out of the wood pulp market Finland managed some way to get her pulp out of the Baltic and into the hands of customers in this country.

Norway didn't do so well. Her pulp shipments into this country were 10,236 tons in January or 1 per cent above the December imports, but December imports from Norway were down 36 per cent below November. Sweden recovered the ground she lost in December with shipments totaling 144,111 tons, 25 per cent above the December total of 115,109 tons, which was 22.7 per cent below November's shipments.

Canadian shipments amounted to 62,835 tons during January, a decline of 14 per cent from the December total of 73,208 tons which was, in turn, 2.4 per cent higher than the shipments in November.

Details of the January wood pulp imports are given in the accompanying tables.

IMPORTS OF WOOD PULP INTO THE UNITED STATES

	January, 1940 Tons	January, 1939 Tons	1940 over 1939
Finland	41,885	24,710	+69.5%
Norway	10,236	6,678	+53.0%
Sweden	144,111	89,429	+61.0%
Canada	62,835	45,500	+38.0%
Total	**259,067**	**166,317**	**+55.7%**

Source: U. S. Department of Commerce, Bureau of Foreign & Domestic Commerce.

Powell River to Dry Unbleached for Market

● Convinced that the market for unbleached pulp will continue strong for some time, especially owing to war conditions, Powell River Company, which in the past has been concentrating almost 100 per cent on newsprint production, is going ahead with extension of its sheet pulp plant.

The present building, housing the Kamyr machine acquired two years ago, is an extension of the company's No. 4 paper warehouse. It measures 235 feet long by 50 feet wide.

The Kamyr machine had a nominal capacity of about 100 tons of sheet sulphite per day at about 55 per cent air dry. The balance of the space available is used for sheet sulphite pulp storage where the bales are handled by an electric lift truck with skips.

The original building was planned for ultimate extension to the warehouse portion which would permit the addition of a dryer to carry the sheet from the Kamyr and deliver it at about 90 per cent air dry.

The latter project has now materialized, and a modern Swedish Flakt dryer and cutter have been ordered for early installation.

A 600-ton automatic hydraulic press of the latest type for pressing the bales to minimum measurements has already been delivered, and the building enlargement is now under way.

The extension will complete the wing formed by the previous extensions, measuring 230 feet by 73 feet. There will be two tracks along one side which can be used for either loaded car storage or for train loading. The rest of the floor will be used for bale storage, thus compensating for the space taken up by the dryer, cutter and press installations in the other building.

The building extension will be a duplicate as to general design of the existing extension, having concrete columns and eaves with hollow concrete tile non-bearing walls.

Roof and trusses will be of wood and a concrete floor will be laid over the storage area. There will be 17 feet 6 inches of head room from the floor to the underside of the trusses, the bales being stacked to this height when in storage.

The building is expected to represent a handsome addition to the mill group and is designed to tone in with the general architectural effect of the other buildings.

The new building will accommodate about 1500 tons of bales stacked on skips in batches of 24 ready for transferring by means of the electric lift truck to cars which will move it to ship side.

While the plant will have nominal capacity for 100 tons of unbleached sulphite pulp per day, the company expects to start operation under the new conditions with about 50 tons a day, working up gradually to the full 100 tons. The project is scheduled to be completed early in July.

Puget Sound Declares Preferred and Common Dividends

● On March 11th the directors of the Puget Sound Pulp & Timber Company declared a dividend of 30 cents a share on the preferred and 50 cents on the common stock, both payable April 1st to stock of record March 21st.

On the left is the new bleach plant addition at Soundview completed in January. Its construction fully modernized the original bleach plant built in 1930. The building directly back of Penn Salt's chlorine tank cars is the bleach plant built in 1937 for the new pulp producing units completed in February and June of that year.

Soundview Sets Fast Pace In Modernizing First Mill Unit

Advance planning coupled with careful timing of operations enabled Soundview to accomplish a large work program with the original pulp producing unit down but 6 days.

IN these days of a strong demand for wood pulp, continuous, uninterrupted production is more than ever the much desired goal of all pulp mills. Necessary repairs and improvements must be made with a minimum curtailment of production, for shutdowns mean lost income.

As the pulp industry steadily progresses, improvements in methods and equipment make changes imperative for the twin purposes of economy and quality. When the point is reached where improvements are sufficiently important to temporarily halt production the problem becomes one of doing the job with a minimum of lost time.

The Soundview Pulp Company of Everett, Washington, one of the busy and progressive Pacific Coast pulp producers, set something of a record for speed in modernization in January when it revamped its first unit of over 200 tons daily capacity with but six days' lost production time. The new units, built in 1937, kept right on running at capacity.

This modernized bleached sulphite pulp producing unit was built in 1930. In 1937, when the two new units were completed, the old mill received minor improvements. Now, as a result of the extensive program completed in January of this year, the old mill is exactly comparable to the new units in its ability to produce all grades of quality bleached sulphite.

Modernization of the original plant brought the over-all daily capacity of the Soundview Pulp Company up to 500 tons of high quality paper pulps. A full 500 tons of one grade can be produced through unified operation of the old and new units, or if desired, the production can be separated and two grades produced simultaneously.

The Changes Made in Six Days

● Over a period of many months, J. H. McCarthy, resident engineer for Soundview, carefully planned the changes. When the directors approved the modernization program in September he was ready to go. On September 18th work began with the driving of piles for the new

bleach plant unit. The big question was how long would the old unit have to be shutdown to cut in the new bleach plant and make the other changes which could not be done while the unit was operating. At first it looked as if 30 days would be the minimum. By employing four 6-hour shifts instead of one and by planning the large amount of work involved so one job synchronized with another, Mr. McCarthy whittled the estimated time down to a week.

When the new bleach plant unit was ready on January 22nd for cutting into the mill system, the original unit shut down at 10 o'clock in the morning. By noon on Sunday, January 28th, everything necessary was done and the completely revamped unit was back in production. The estimate of a week's shutdown had been bettered for only six days' production was lost.

During those six days 175 men, working four 6-hour shifts, cut in the new bleach plant which changed the old one from a two-stage to a three-stage unit; connected up circulating systems to the six digesters in the original mill and put in the strainers (the six new digesters were already equipped). Piping, heat exchangers and pumps had been put in place prior to the closing down of production. Tile bottoms were removed from three blow pits and new stainless steel drainer plates installed. All twelve blow pits are now equipped with stainless steel drainer bottoms.

Flow meters were installed on acid circulating lines on all twelve digesters and each digester is now equipped with the following instruments:

1. Flow meter on steam line to heat exchanger.
2. Flow meter on acid circulating lines.

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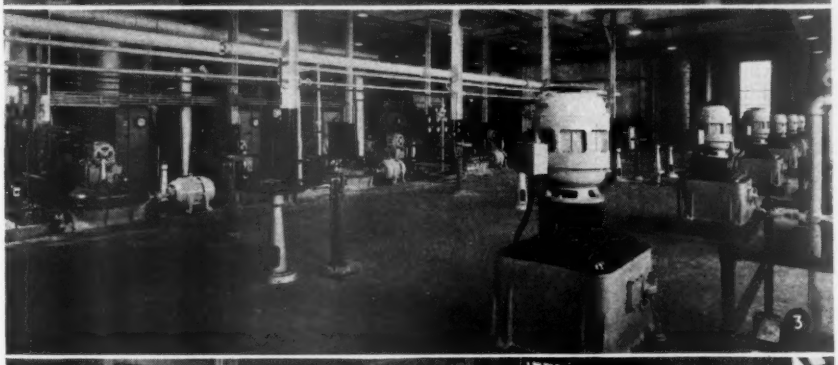
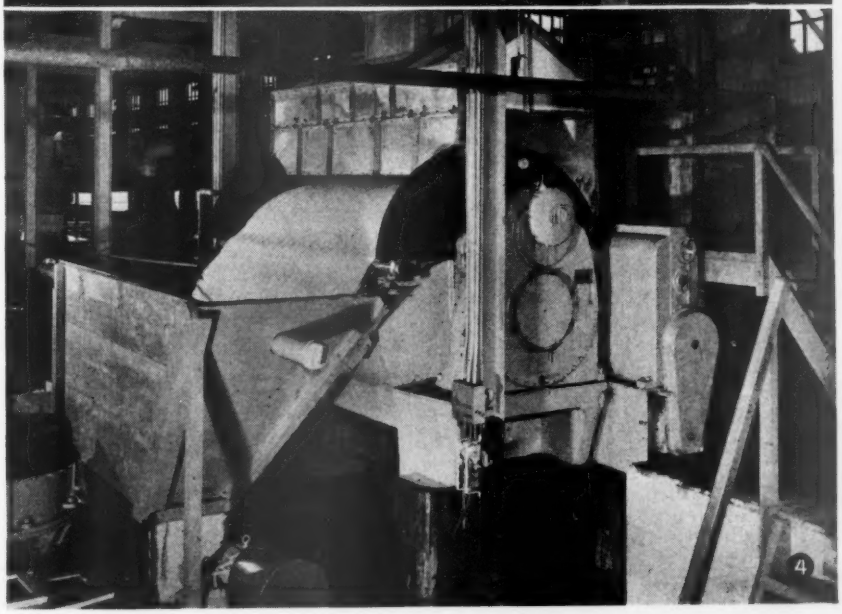


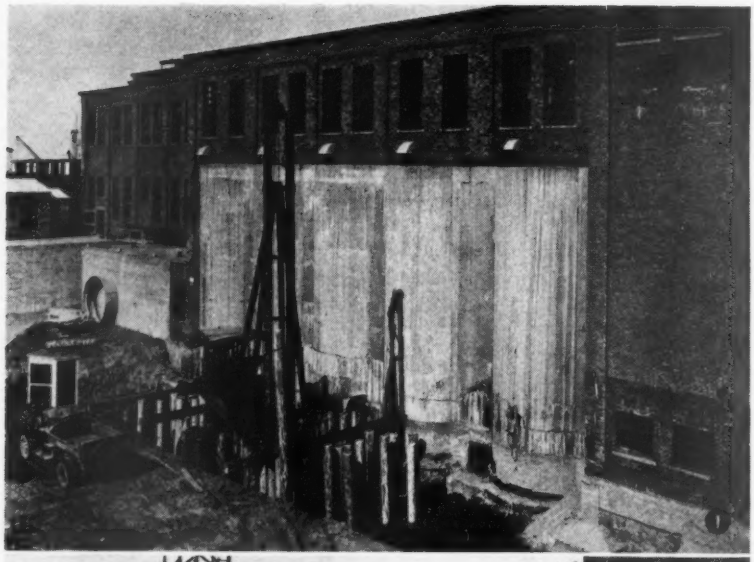


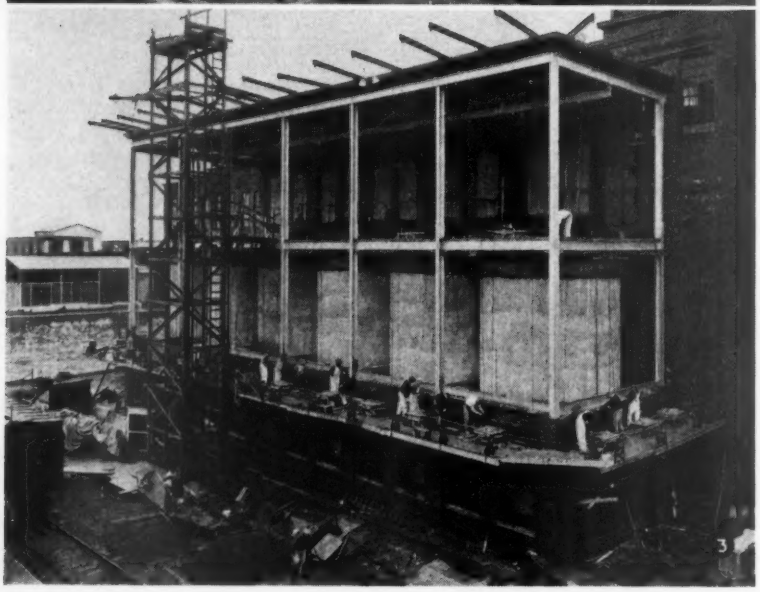
The six new bleach cells appear in No. 1, with Pulp Bleaching Company cells and drives built for PBC by the Western Gear Works. Driven by Fairbanks, Morse vertical motors.

No. 2 shows the new cells on the left with the original bleach plant in the background beyond the first line of steel girders.

In No. 3, is a view from the other end of the new bleach plant with the original unit showing in the left background.

The new Oliver 6x10-foot rubber covered bleach washer shows in No. 4. It is washing pulp after the first or chlorination stage.





3. Recording thermometer showing digester temperature.

4. Two-pen recording thermometer showing the temperature of the acid entering and leaving the heat exchanger.

5. Liquid level recorder showing the level of acid in the digester throughout the cook.

6. Controlling pressure recorder which maintains the desired pressure on the digester.

7. Recording ammeter on the motor for the acid circulating pump showing the motor input.

Drying machines Nos. 1 and 2, the original machines, came in for considerable work. New head and mix boxes were installed and the wire pits were white tile lined. The machines were completely scraped and repainted, the fourdriniers in white and the dryers in gray. Two concrete stock chests were lined with brown tile. A new 6x10-foot Oliver vacuum washer was installed and connected up to wash after the first or chlorination stage in the remodeled bleach plant.

One of the more complicated jobs performed in the six days was the changes of piping and pumping necessitated by the enlargement of the bleach plant and the unification of the old and new pulp producing units. Several departments, such as acid making, will later be interconnected to permit single control when desired.

The New Bleach Plant

● The original bleach plant employed two stages. It was changed to a three-stage batch cycle type with a stage of chlorination and two stages of hypochlorite bleaching, the same system as is employed in the new bleach plant built in 1937.

Six new bleaching cells were built. When used as a two-stage system the bleach plant had 12 cells, 5 first stage and 7 second stage. Three of the new cells are employed for chlorination at low density, and

●

Five days after construction of the new bleach unit began, on September 23rd, the photograph in No. 1 was taken. The five cells showing were the original first stage but now part of the third stage in the modernized bleach plant. The wall above them was removed after the new addition was completed.

No. 2 was taken on October 18th and No. 3 on November 13th. The completed building, inside as well as out as it appeared on January 26th, is shown in the photograph at the beginning of this article.

PROPERTY OF SEATTLE

the system now contains 3 chlorinating cells, 5 high density hypochlorite cells and 8 low density hypochlorite cells with auxiliary washers and chests.

After chlorination, the stock is pumped to an Oliver rubber covered bleach washer with a 6-foot in diameter cylinder 10 feet long. The washer is located on the top floor of the bleach plant. The stock is diluted to about 1 per cent consistency in a mixing box ahead of the Oliver using filtrate from the third stage washer for dilution mixing water.

About 600 gallons per minute of fresh water is applied to the sheet as it passes over the washer. The sheet discharged from the washer at 12 per cent consistency is diluted to about 5½ per cent by a shower over the discharge apron and carried by a screw conveyor into two of the former second stage cells which are now used for stock storage only. Here the stock is neutralized with alkali. The amount is controlled by continuous pH recording.

After the second stage bleaching the pulp is again washed, thickened and pumped into the eight third stage cells. The five former first stage cells together with the other three new cells now make up the new third stage low density system. All hypochlorite cells, high as well as low density ones, are equipped with recording thermometers for careful control of temperatures.

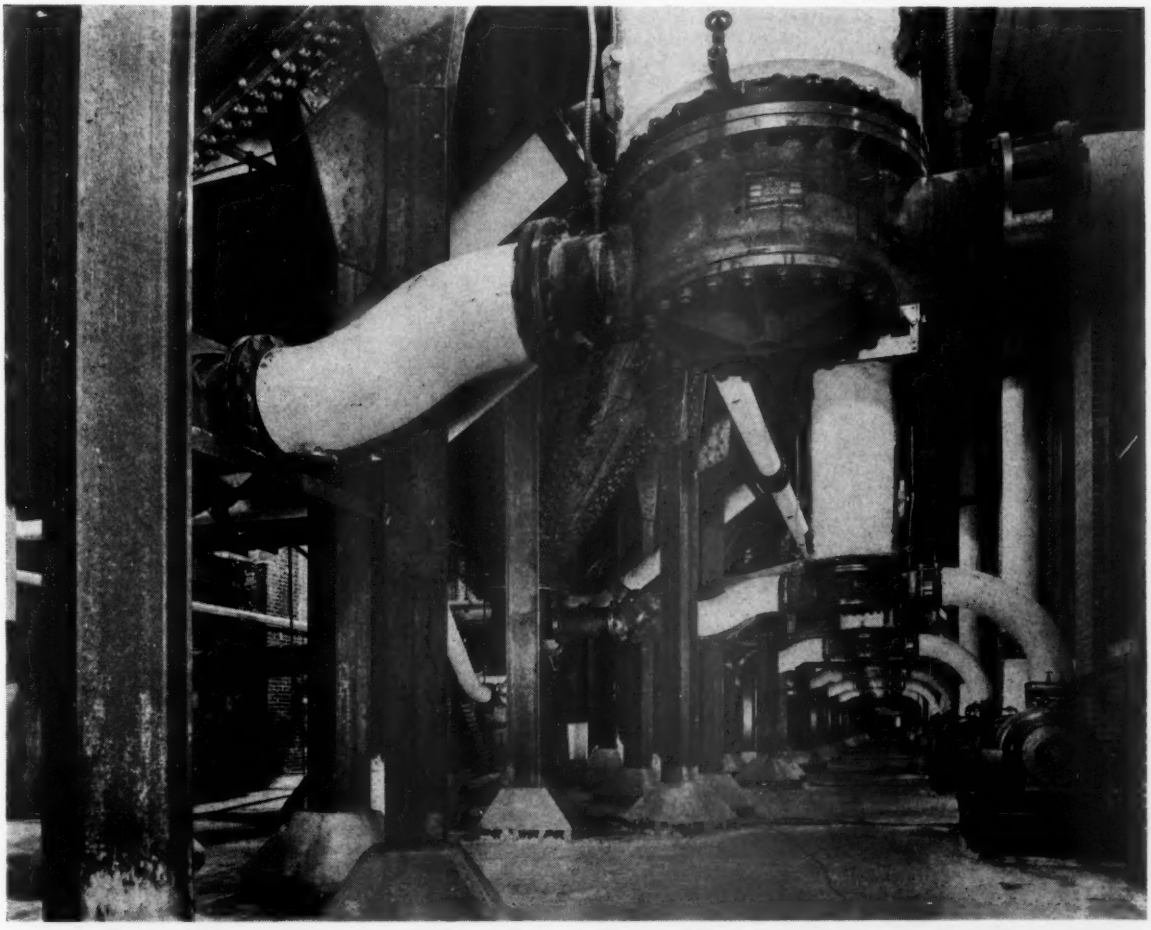
The five cells originally used as the first stage and now part of the third stage system show in the picture taken September 23rd. When the new cells were completed the wall shown in this picture was torn out, making the bleach plant operating floor a single room.

● The revamping of the original bleach plant and the adding of a third stage was done without the construction of new stock chests despite the addition of two new stages of washing. This was accomplished by using the two extra cells as chests and by the design of the flow system and the arrangement of the pumps.

The operators are able to watch and control the amount of pulp in the chests between the different stages as well as in the chests before and after the bleach plant by merely looking at the centralized panel board on which are mounted level gauge recorders, recording the stock levels in the different chests.

A double track rail siding was constructed alongside the bleach plant to permit the spotting of two chlorine tank cars side by side. A new chlorine discharge system was installed. Chlorine from the Pennsylvania Salt Manufacturing Company of Washington's cars is forced out and into the mill system by the compressed air, pre-dried by passing through a sulphuric acid air dryer. As the chlorine from one car is exhausted the bleach plant operator merely shuts the valve on the empty car and opens the valve on the full car previously connected to the mill system. From the control valve into the chlorinators the chlorine is piped in Pyrex glass pipe.

The equipment purchased by the



The TWELVE DIGESTERS in the Soundview Pulp Company's bleached sulphite pulp mill appear to extend to infinity. All are now equipped with Electric Steel Foundry Company's circulating systems.

Soundview Pulp Company in connection with the modernization of the first mill unit, included a 6x10-foot rubber covered Oliver vacuum bleach washer. It is of steel and cast iron with rubber covering on all surfaces which come in contact with the pulp or filtrate. The facing wire and its support are stainless steel. The washer is driven by a 10-hp. Fairbanks, Morse splashproof motor, a variable speed transmission and Oliver gear reduction. The sheet is removed from the washer by a fluted rubber covered discharge roll. Filtrate is discharged through a 12-inch rubber lined barometric leg.

The six new bleach cells are of Pulp Bleaching Company design. The drives were furnished through the James Brinkley Company of Seattle, Pulp Bleaching's Pacific Northwest representatives. The Brinkley Company also furnished two Pulp Bleaching adjustable pitch rubber covered 50-inch propeller agitators for stock chest agitation. The Western Gear Works of Seattle manufactured the speed reducers for the six new cell drives and furnished them through the Pulp Bleaching Company. Western Gear also supplied the two agitator drives and one screw conveyor drive.

The Stebbins Engineering Corporation of Seattle lined the six new bleach cells in advance of the shutdown period, and in five of the six days the original unit was shut down, Stebbins lined the two-machine wire pits, two-machine stock chests (both with white tile), patched the old bleach cells and the white tile lined screw conveyor troughs.

Approximately 20 new Fairbanks, Morse electric motors were added, bringing the total in the Soundview mill above 370. The new ones include six vertical motors for the new bleach cells and five new horizontal motors for the old bleach cells which required more power in the three-stage system adopted, as well as a motor for the Oliver washer, and motors for pumps and fans.

The Bingham Pump Company of Portland, Oregon, supplied four pumps for the revamped bleach plant, two horizontal rubber lined pumps and two vertical decker type pumps, one 60 hp. and one 150 hp.

To eliminate the odor of chlorine in the bleach plant a hood was placed over the new Oliver washer and an exhaust fan removes fumes arising from the chlorinated stock being washed. Drew & Hoffman of Portland furnished this hood and three small ejector type fans on the first stage chlorinators. These are mounted on wood pipes which extend from the top of the cells through the roof. By drawing a small amount of air from the room and forcing it upward through the pipes a suction is created which draws all fumes from the chlorinators.

All stock and water piping is of wood stave construction as in the new units. The wood pipe is equipped with leadized bands and shoes and with lead tongues. Steel elbows and fittings (approximately 170) were rubber lined. The Austin Company of Seattle constructed the new bleach plant building and installed all the equipment and the piping; also the stainless steel drainer bottom plates in the three blow pits.

The circulating systems connected up to the six digesters in the first unit were furnished by the Electric Steel Foundry Company of Portland, Oregon.

Talk of New Mills In British Columbia

● If pulp markets continue to improve as they have in the recent past, prospects for expansion of the industry in British Columbia are considered brighter than they have been in years, according to a report from Vancouver, B. C.

Pulp shipments from British Columbia mills have shown substantial increase since the war, due very largely to war conditions. Although shortage of ships has throttled many other industries, pulp and paper have been boosted by the world-wide dislocation of trade due to shipping troubles, blockade and other war factors. Curtailment of European competition has played into the hands of B. C. producers.

At the moment, the most likely new development will be in connection with Bloedel, Stewart & Welch. This company is generally regarded as the largest single operator in British Columbia logging, with camps at Franklin River, Menzies Bay and Great Central Lake, all on Vancouver Island. The company has a large export mill at Port Alberni.

With an abundance of timber suitable for pulpwood in its possession, the Bloedel organization has long been regarded as a potential factor in the pulp industry, but only during the past few days have executives of the company guardedly admitted to the press that surveys had been made on a rather extensive scale looking to the launching of a pulp enterprise.

Plans are a long way from being completed, and there are several formidable hurdles to be overcome before the company decides to go ahead with construction of a mill, but the physical and financial position of the Bloedel organization is such as to make it a "natural" for pulp development.

If Bloedel does build a mill it will be somewhere along the west coast of Vancouver Island, probably at Port Alberni. The mill would operate as a supplementary unit to the sawmill there and such a setup would reduce the overhead to a minimum, as the company already has trackage and wharf facilities suitable for the use of additional production equipment. Nearly all the logs used by the Bloedel mill are shipped down from the interior of the island by rail, and such a procedure would probably be followed with pulpwood, although a pulp mill at Port Alberni would be in an advantageous position to buy pulpwood from a widely scattered area up and down the west coast in a territory that so far has been very little exploited.

If Bloedel obtains approval of the necessary authorities and decides to go ahead, it is expected that the first unit will be built at a cost of between $3,000,000 and $5,000,000, to be expanded later as conditions warrant.

The British Columbia government is regarded as being favorably inclined towards establishment of a pulp mill on the west coast as it would provide a means of utilizing a large quantity of pulpwood that is now being exported for lack of home market. Much of the pulpwood now being shipped to the state of Washington originates on the west and southwest coast of Vancouver Island.

Water power resources at Port Alberni have been investigated, and engineers believe they are adequate for the required purposes. Stamp River Falls are one potential source of power near Alberni, and there are others.

Port Alberni was one of the sites considered by A. E. McMaster, of Vancouver, for a pulp mill to be established by British capital. The project seemed near reality two years ago, but the Munich crisis, followed by mounting tension in Europe climaxed by the war, terminated negotiations. When conditions return to normal, however, it is anticipated that the same capital will be available for a west coast mill.

The war and the difficulties over foreign exchange have been factors chiefly responsible for suspension of negotiations in connection with the Prince Rupert project, although plans had been completed for early construction when the war broke out. A good deal of the capital for this enterprise was to come from the United States, and complications over exchange discouraged the development, at least for the time being.

Charles M. Barr Married in Seattle

● Charles M. Barr of the Seattle consulting engineering firm of Cavin, Marshall & Barr, was married on Saturday, March 9th, to Miss Kathlyn Backus of Seattle. The ceremony was held in the First Baptist Church of that city.

The newlyweds, who are now at home in the Exeter Apartment Hotel in Seattle, plan to leave around May 1st on their honeymoon trip to Honolulu.

Sumner Expanding Converting and Storage Facilities

● The Sumner Division of Fibreboard Products, Incorporated, at Sumner, Washington, has begun construction of a new building one story high, 110 by 210 feet, to permit expansion of converting and storage facilities. The converting expansion will embrace all types of containers made at the Sumner Division. Work is well under way and will be completed within 90 days. This job, as are all improvements in manufacturing, is under the direction of N. M. Brisbois, vice-president in charge of manufacturing for Fibreboard.

The addition to the converting plant of Fibreboard's Antioch, California, board mill was completed in mid-February, while the enlargement of the converting plant at the Stockton mill will be finished by April 1st.

Jack Wilcox Now With Electric Steel Foundry

● John M. (Jack) Wilcox joined the engineering staff of the Electric Steel Foundry Company of Portland, Oregon, on March 1st, and will devote his time largely to pulp and paper mill work. His resignation as resident engineer for the St. Regis Kraft Company of Tacoma, Washington, became effective on the same date.

Mr. Wilcox is a 1932 graduate of the Mechanical Engineering Department of the College of Engineering, University of Washington, Seattle. His first three years of college work were spent at the University of California. Upon graduation he went to work in the engineering department of the Longview Fibre Company where he had worked during the summer vacations of 1929, 1930 and 1931. In August of 1936 Mr. Wilcox left to become assistant resident engineer for the St. Regis Kraft Company. In the early summer of 1937 he became resident engineer when Harold D. Cavin resigned to enter private consulting engineering work.

The Electric Steel Foundry Company are large manufacturers of stainless steel products for the pulp and paper industry including the well known ESCO sulphite circulating system. A variety of other alloys are produced by the company and used by a number of industries throughout the country.

Suggestions

● "Years ago, when a man worked for a company, he had a job, and that was about the end of it," says the Fibreboard Bulletin, published by the employees of the Vernon Division in Los Angeles.

"He started in the morning, plugged away until evening, and as far as being identified with the company was concerned he might as well have been in Borneo.

"But those days have gone forever.

"We don't want our people to grind away all day without putting their brains to work. We much prefer them to study and to improve their jobs. That is one of the reasons we have Suggestion Boxes.

"They are a valuable link between the management and the employees.

"They give employees an opportunity to cash in on their ideas.

"And they make it possible for the management to profit by suggestions also.

"Are you cooperating?"

Longview Fibre Orders New Beloit Machine

● The Longview Fibre Company of Longview, Washington, manufacturers of kraft pulp, paper and board, have ordered a new 200-inch fourdrinier paper and board machine from the Beloit Iron Works of Beloit, Wisconsin.

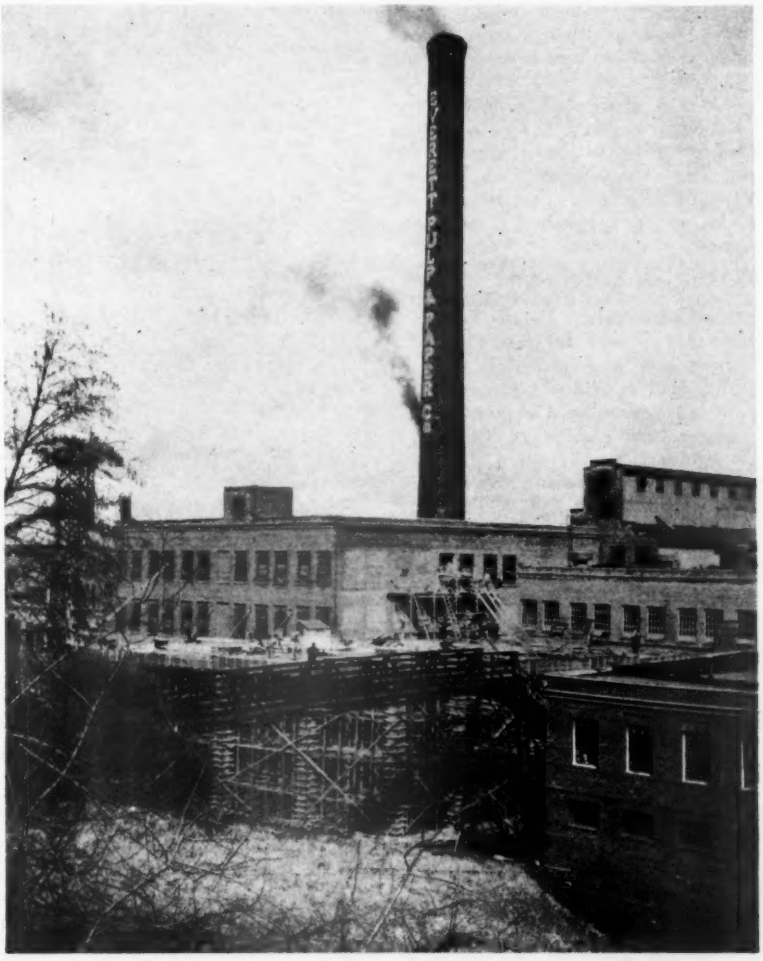
The announcement was made March 6th by R. S. Wertheimer, resident manager and secretary-treasurer of the company. It is expected that the new machine will be in operation before the end of the year.

The design and construction will permit great flexibility in the grades of kraft paper and board produced. Capacity will range from 100 to 150 tons per day depending upon the grades manufactured.

The machine will be known as No. 5 and will be installed in the space provided alongside No. 4 machine when the new machine room was built several years ago. Until recently this space has been used for roll storage, but new warehouse facilities were developed by constructing a few months ago a building, 140 by 500 in size, which also houses the bag making division and the mill offices. In their former locations the bag making plant and the offices would have interfered with the press and dryer sections of the new machine.

Mr. Wertheimer's announcement stated that the new machine will produce paper now made on the small No. 3 machine which has a capacity of but 40 tons per day.

With the installation of No. 5 machine the Longview Fibre Company will have three Beloit machines in operation, No. 2, the Yankee paper machine, and No. 4, the corrugating board machine, have been in operation some years.



THE EVERETT PULP & PAPER COMPANY'S new bleaching and screening building is rapidly taking shape and will be ready for production by June 1st ' ' ' It is located across the walkway from the office which shows at the lower right.

Technical Papers Feature Portland TAPPI Dinner

THE fifth of the Pacific Section of TAPPI dinner meetings of the 1939-1940 series, was held on the evening of March 5th at the Heathman Hotel in Portland, Oregon.

In the absence of Chairman N. W. Coster, Vice-Chairman Fred A. Olmsted presided and briefly outlined the February TAPPI meeting in New York which both he and Mr. Coster attended.

Two papers were presented at the Portland dinner before a crowd of 89 men who constituted a representative cross section of the Pacific Northwest industry. All the Oregon and southwest Washington mills were well represented and a number came from the Puget Sound plants and from New Westminster, B. C., 350 miles to the north.

Dr. Leo Friedman, assistant professor of chemistry at Oregon State College in Corvallis, Oregon, spoke on "Recent Advances in the Chemistry of Lignin." Dr. Friedman's paper will be published in an early issue.

The second paper was offered by one of the younger technical men in competition for the Pacific Section's annual Shibley Award. Cecil L. Triplett of the technical department, Hawley Pulp & Paper Company, Oregon City, Oregon, read a paper covering some of his recent experimental work entitled, "A Routine Test for Organic Matter in Sulphite Liquors." Mr. Triplett's paper is published in this number. Discussion followed the reading of the papers.

Mr. Olmsted reminded those present that the National TAPPI Fall Meeting is to be held in Seattle, Washington, from August 20-23rd and urged them all to be there to take part in the interesting and highly instructive program now in course of planning.

The next meeting, Mr. Olmsted announced, will be held at Port Angeles, Washington. Of the two speakers one will be O. K. Chapman of the Pulp Division, Weyerhaeuser Timber Company, Everett, Washington, who will give a paper in competition for the Shibley Award on the subject of, "Pulp Moisture Testing." The second speaker, said Mr. Olmsted, will be announced shortly.

The following men attended the dinner meeting in Portland, March 5th, 1940:

● **C. E. Ackley,** Hawley Pulp & Paper Co., Oregon City; **B. R. Adams,** Hawley Pulp & Paper Co., Oregon City; **Gerald Alcorn,** Pulp Division, Weyerhaeuser Timber Co., Everett; **Leslie L. Anderson,** Pulp Division, Weyerhaeuser Timber Co., Longview; **D. B. Armstrong,** Oregon Pulp & Paper Co., Salem; **John Ashby,** Westminster Paper Co., New Westminster, B. C.; **A. J. Bailey,** University of Washington, Seattle; **Geo. D. Bailey,** Crown Willamette Paper Co., Division of Crown Zellerbach Corp., Camas; **W. M. Bain,** The Glidden Co., Chicago; **Lee C. Baltzelle,** Pacific Indemnity Co., Seattle.

● **Chester Beals,** Crown Willamette Paper Co., Division of Crown Zellerbach Corp., Camas; **C. H. Belvin,** Chromium Corp. of America, Portland; **S. B. Biddle, Jr.,** Leeds & Northrup Co., San Francisco; **Homer H. Best,** Pulp Division, Weyerhaeuser Timber Co., Longview; **Bernard Bornstein,** Norton Co., Worcester, Mass.; **A. M. Cadigan,** St. Regis Kraft Co., Tacoma; **R. E. Chase, Jr.,** R. E. Chase & Co., Portland; **Claud Christiansen,** Crown Willamette Paper Co., Division of Crown Zellerbach Corp., Camas; **W. W. Clarke,** Longview Fibre Co., Longview; **J. V. B. Cox,** Hercules Powder Co., Portland; **R. E. Dana,** Oregon State College, Corvallis.

● **R. T. Tickie,** Crown Willamette Paper Co., Division of Crown Zellerbach Corp., Lebanon; **C. A. Enghouse,** Crown Willamette Paper Co., Division of Crown Zellerbach Corp., West Linn; **Lloyd R. Ewing,** Longview Fibre Co., Longview; **Carl Fahlstrom,** Longview Fibre Co., Longview; **Francis W. Flynn,** Crown Willamette Paper Co., Division of Crown Zellerbach Corp., Camas; **Leo Friedman,** Oregon State College, Corvallis; **Harry Fromong,** Hawley Pulp & Paper Co., Oregon City; **Howard B. Gerber,** Williams-Gray Co., Chicago; **Wm. R. Gibson,** Northwest Filter Co., Seattle; **C. H. Graham,** The Foxboro Co., Portland.

● **T. H. Grant,** Columbia River Paper Mills, Vancouver, Wash.; **David C. Greeley,** Pulp Division, Weyerhaeuser Timber Co., Longview; **R. B. Haight,** Crown Willamette Paper Co., Division of Crown Zellerbach Corp., Camas; **R. N. Hammond,** Pulp Division, Weyerhaeuser Timber Co., Longview; **John F. Hart,** Longview Fibre Co., Longview; **H. A. Hauff,** Pulp Division, Weyerhaeuser Timber Co., Longview, **Jan Haugerod,** Crown Willamette Paper Co., Division of Crown Zellerbach Corp., West Linn; **Albert H. Hooker, Jr.,** Hooker Electrochemical Co., Tacoma; **C. W. Jacoby,** Crown Willamette Paper Co., Division of Crown Zellerbach Corp., Camas; **L. T. Johnson,** Hawley Pulp & Paper Co., Oregon City.

● **Herman Jorgensen,** Pulp Division, Weyerhaeuser Timber Co., Longview; **W. A. Kelly,** The Waterbury Felt Co., Portland; **Ernie Kertz,** John W. Bolton & Sons, Portland; **Robert B. Kirkwood,** Crown Willamette Paper Co., Division of Crown Zellerbach Corp., Camas; **Robert Lovin,** Oregon State College, Corvallis; **D. K. MacBain,** Pulp Division, Weyerhaeuser Timber Co., Longview; **Robert W. Martig,** Brown Instrument Co., Portland; **C. R. McCully,** Pulp Division, Weyerhaeuser Timber Co., Longview; **G. N. McGregor,** Pulp Division, Weyerhaeuser Timber Co., Longview; **Roy R. Miller,** Crown Willamette Paper Co., Division of Crown Zellerbach Corp., Camas.

● **T. E. Moffit,** Hooker Electrochemical Co., Tacoma; **T. H. Moran,** Pulp Division, Weyerhaeuser Timber Co., Longview; **George Nelson,** Crown Willamette Paper Co., Division of Crown Zellerbach Corp., Camas; **M. E. Norwood,** Columbia River Paper Mills, Vancouver, Wash.; **Ross O'Brien,** Crown Willamette Paper

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April TAPPI Dinner In Port Angeles

The next TAPPI Dinner Meeting will be held at Port Angeles, Washington, on Tuesday evening, April 9th at 6:30 p. m. The place will be announced later.

Of the two papers to be presented, one will be given by O. K. Chapman of the Pulp Division, Weyerhaeuser Timber Company, Everett, on the subject, "Pulp Moisture Testing." Mr. Chapman's paper will be entered in competition for the Shibley Award. The second paper has not been announced to date.

Howard Graham of the Central Technical Department, Crown Zellerbach Corporation, will be in charge of arrangements for the meeting in Port Angeles.

Co., Division of Crown Zellerbach Corp., Lebanon; **F. A. Olmsted,** Crown Willamette Paper Co., Division of Crown Zellerbach Corp., Camas: **Gus Ostenson,** Crown Willamette Paper Co., Division of Crown Zellerbach Corp., Camas; **E. T. Parker, Jr.,** Crown Willamette Paper Co., Division of Crown Zellerbach Corp., Camas; **Morris M. Peterson,** Pulp Division, Weyerhaeuser Timber Co., Longview; **Paul A. Pittenger,** Pulp Division, Weyerhaeuser Timber Co., Everett; **Alber S. Quinn,** Stebbins Engineering Corp., Seattle.

• **E. D. Rich,** Oregon Pulp & Paper Co., Salem; **E. J. Roake,** Crown Willamette Paper Co., Division of Crown Zellerbach Corp., West Linn; **Cass B. Roberts,** Crown Willamette Paper Co., Division of Crown Zellerbach Corp., Camas; **H. L. Rudow,** Scientific Supplies Co., Portland; **J. M. Ruck,** St. Regis Kraft Co., Tacoma; **Rex Russell,** Longview Fibre Co., Longview; **Jack V. Savage,** Crown Willamette Paper Co., Division of Crown Zellerbach Corp., Camas; **B. W. Sawyer,** The Foxboro Co., Portland; **Harlan Scott.** Pacific Pulp & Paper Industry, Seattle; **Chas. M. Server,** Gillen-Cole Co., Portland.

• **W. J. Shelton,** Longview Fibre Co., Longview; **Brian Shera,** Pennsylvania Salt Mfg. Co. of Washington, Tacoma; **D. L. Shirley,** Link-Belt Co., Portland: **L. E. Stevenson,** Pulp Division, Weyerhaeuser Timber Co., Longview; **C. F. Stevey,** Crown Willamette Paper Co., Division of Crown Zellerbach Corp., Camas; **Franz Sturm,** Oregon Pulp & Paper Co., Salem; **A. C. Salisbury,** St. Helens Pulp & Paper Co., St. Helens; **Earl G. Thompson,** Great Western Division, The Dow Chemical Co., Seattle.

• **Cecil R. Triplett,** Hawley Pulp & Paper Co., Oregon City; **R. M. True,** General Dyestuff Corp., Portland; **Preston Varney,** Pulp Division, Weyerhaeuser Timber Co., Longview; **G. R. Vernig,** Pulp Division, Weyerhaeuser Timber Co., Longview; **R. D. Waddell,** Crown Willamette Paper Co., Division of Crown Zellerbach Corp., Lebanon; **Harold C. Wall,** Longview Fibre Co., Longview; **Fred J. Weleber,** Hawley Pulp & Paper Co., Oregon City; **Jack Wilcox,** Electric Steel Foundry Co., Portland; **Edward P. Wood,** Pulp Division, Weyerhaeuser Timber Co., Longview.

Ocean Falls, Powell River Running Well

• Increasing demand for kraft paper in markets that depended to a large extent on Scandinavian countries for their supplies has been an important factor in stimulating production at Pacific Mills, Ltd., Canadian subsidiary of Crown Zellerbach Corporation at Ocean Falls, B. C.

For several weeks the Pacific Mills have been operating on a seven-day week basis with production close to 100 per cent. How long the company will continue on that schedule will be determined by the trend of the market.

Powell River Company, biggest newsprint producer in British Columbia, is running five to six days a week and output is about 70 per cent of capacity. Powell River executives report that the war has not created any new business for them so far, but the lessening of Scandinavian competition which had the advantage of depressed exchange is expected to be a factor of growing importance as the war continues. Most of the European paper now being marketed on this continent was already on the water when war was declared, but deliveries from now on should be more difficult.

Powell River is giving preference to regular customers and they have been requiring sufficient newsprint to keep the mill busy. This company has sold extensively in Texas and other southern states in the past, and while sales are maintaining their regular volume in that market now the increasing production of newsprint from southern pine may cut into sales there before long. The company continues to ship some newsprint to the Orient, but in negligible quantity. Deliveries to Australia have been well maintained by liner space.

Westminster Paper to Redeem Entire Funded Debt

• The entire funded debt of Westminster Paper Company, New Westminster, has been called for redemption on April 1. The outstanding bonds will be redeemed from the company's own cash resources except for a small loan. In other words, the company's liquid position is such that no major borrowing is required to wipe out the company's senior obligation.

A saving of about $1100 monthly in interest payments will be effected by the retiring of the 6½ per cent first mortgage sinking fund debentures. These debentures, dated April 1, 1930, and due April 1, 1950, are callable at 105 to March 31, 1940, and thereafter at 103.

The original issue was $300,000, but through operation of the sinking fund the outstanding amount had been reduced to $204,500 at January 31, 1939. The company at that date had $91,500 of the latter amount in its sinking fund so that the net amount outstanding was $113,000.

When a proposal considered last fall for a short term bank loan to retire the remainder of the debt became expedient because of the outbreak of war, the company adopted a new policy. It was decided to curtail customary capital expenditures in connection with the continuous modernization program until funds had accumulated sufficiently to pay off the bonds from the company's own cash resources.

This policy has been successful with the result that within another three or four months officials expect that working capital will be sufficiently restored to permit resumption of the gradual improvement and extension of equipment which is part of the company's normal program.

New equipment to extend markets and reduce operating costs is steadily being purchased from surplus funds and it is proposed to continue this policy.

For this reason the increase in earnings and the savings in interest charges will not, it is understood, be employed for increase in the dividend rate for some time. As long as further modernization and gradual expansion give promise of increasing volume of sales and adding new sources of income, it is considered good business to plough back surplus earnings into additional plant.

As the company's fiscal year ended January 31, it is too early to give any definite indication of the results, but the showing made in the preceding year is believed to have been maintained and possibly improved upon. Earnings per common share in the year ended January 31, 1939, were $1.84. In the half year ended January 31, 1938, 48 cents per share was earned, while in the year ended July 31, 1937, earnings were 62 cents per share. Common dividends were paid continuously at 40 cents per annum from 1931 until 1938 when the rate was increased to 50 cents.

Richvale Mill Installing Small Paper Machine

• A small paper machine is being installed by the Pacific Coast Pulp & Paper Corp. at Richvale, California, according to D. M. Thompson, manager.

The machine has nine dryers, and should be operating in a couple of months. The corporation plans the manufacture of tissue paper. Thompson estimated a total of from 10 to 12 men would be employed at first, with the plant operating 24 hours per day. Pulp is made from rice straw.

Hollander Visiting British Columbia Mills

• Dr. A. E. D. Saher, of Amsterdam, Dutch paper company executive, has been visiting British Columbia with a view to surveying the possibilities of buying Canadian paper for Netherlands' industries. Holland, he reports, has been deprived of its usual sources of supply.

While Dr. Saher expressed the opinion that the coarse paper grades he desires will be more easily obtainable in the United States he prefers to buy in Canada to further trade relations between the two countries and take advantage of the easier rate of exchange.

The volume of Dr. Saher's purchases will depend on many factors, including prices and supply available. Dutch industries formerly obtained their coarse paper from Scandinavian countries.

British Columbia paper men doubted whether they would be in a position to sell much paper to Holland, although some has been sold to the Dutch East Indies. Most mills are already fully occupied taking care of requirements of regular customers.

Powell River Lab Ready May 1st

• Basic idea behind construction of Powell River Company's new laboratory building is the centralization of all facilities for testing and research work. In the past the chemical staff has been crowded in quarters originally planned for a much smaller operation. Gradual expansion of Powell River's production and the highly competitive market's requirement for constant experimentation and improvement have emphasized the need for better accommodation for this branch of the plant's activity.

The building, excavations for which have already been started, will be about 50 feet by 85 feet and will have two floors. It will house the testing, experimental and research staffs with all their scientific equipment.

Air conditioning is to be installed along with indirect lighting, and constant-temperature water and humidity equipment will be available at all times.

The architects, McCarter & Nairne, Vancouver, designed the building from plans prepared by the Powell River Company's engineers.

The building will occupy a site long taken by the old post office and customs office building. It will be ready for occupancy about May 1.

The Paper Mills Are Lucky

"AT present," states Thomas B. McCabe, president of the Scott Paper Company of Chester, Pa., in his annual message to stockholders, "95 per cent of your Company's estimated pulp requirements is now in hand, in transit, or covered by contracts with Canadian and American suppliers. Therefore, your Company is not seriously concerned about its foreign pulp supply for 1940 except as it may affect the pulp inventory for 1941. If the European conflict continues until 1941, then shipments under foreign contracts may be further curtailed.

"With this in view, your Company has been successfully developing American sources of supply, and the proportion of foreign pulp required is constantly diminishing."

Mr. McCabe is to be congratulated upon the adoption of this policy for it will provide more employment for American pulp mill employes and contribute much toward the profitable utilization of American forests. The Scott Paper Company is one of the largest buyers of woodpulp and the domestic pulp mills are mighty glad to have a larger share of the company's business than before the European war.

American paper mill buyers of pulp are lucky that there was an American supply to which they could turn when foreign sources became uncertain. Suppose there had been no American pulp for sale when war was declared and overseas and Canadian supplies had been cut off. Most paper mills dependent upon outside pulp supplies would be shut down tight and the sheriff would have tacked up a lot of notices by this time.

This is not a far-fetched thought, for the American pulp industry came closer to folding up in four different years of the last decade than the paper mills were willing to believe. We don't have to go any farther back than July, 1939, to find officers and directors in serious conferences considering the advisability of closing down indefinitely because of market raiding by foreign producers. Had it not been for modern mills, good management, a willingness on the part of stockholders to stand frequent losses, and a few loyal customers who were willing to pay a premium for American pulp, there would have been almost no American pulp industry ready to serve domestic buyers on September 1, 1939.

As a group the paper mills who buy their pulp can take no credit for the existence of an American pulp industry. Twice, when the pulp industry was fighting for protection against the pulp from countries that had deliberately depreciated their currencies to enable them to cut prices, a number of American paper mills actively opposed any help whatever for the domestic pulp industry through such agencies as The Temporary Committee for Wood Pulp. This was a shortsighted policy, as is now generally recognized, for the price of paper cannot long remain stable in the face of a chaotic pulp market.

This unfortunate attitude has been replaced, at least for the duration of the war, by a feeling of thankfulness on the part of the paper industry that the American pulp mills are able to supply such a large proportion of the demand. For the good of both buyers and sellers it is to be hoped that this feeling continues after the war is ended.

For the record it should be pointed out that the domestic producers of woodpulp for the market have not taken advantage of the buyers' situation since the war began, but have fully cooperated by keeping the lid on pulp prices. Today domestic pulp prices are many dollars below the cost of foreign pulp delivered. The pulp industry is trying its best to maintain a stable market to permit a fair profit for themselves and for their customers.

Now the American pulp mills are showing their loyalty to the paper mills. Some day the paper mills will again have an opportunity to show their loyalty to the domestic pulp mills.

It becomes increasingly clear that while foreign sources for woodpulp cannot be denied the converting mills in the United States there are very broad reasons why it is to the interest of the pulp and paper industry in this country to work out basic principles that will prevent the foreign producers to again seriously cripple the investment of millions of dollars and thousands of jobs in American pulp mills and woods operations.

The Associations Should Get Busy

THERE has never been a time when the interests and the aims of the members of the American Paper & Pulp Association and the members of the United States Pulp Producers Association, were more similar than at present.

Their interests have always been mutual but their aims have frequently been divergent through misunderstanding. Prior to the start of the conflict in Europe the mutuality of interests was becoming more apparent to an increasing number of paper manufacturers. But it remained for the war to spotlight the fact that the members of both associations are fundamentally interested in market stability, and that neither group can achieve this stability without the other.

Last April in Savannah, D. Clark Everest, president of the American Paper & Pulp Association, succinctly stated the interests of both groups when he said, "After all, the price of pulp controls the price of paper."

Mr. Everest spoke in similar vein before the annual meeting of the Technical and Woodlands Section of the Canadian Pulp and Paper Association in Montreal on January 26th. He was quoted as saying in part, "Following the war the pulp manufacturing countries of Europe will be under extreme pressure to develop export trade. Their currencies are likely to feel the effects of war drain, and pulp consumption throughout the world may require a considerable period of time to build up to a normal level. We may face then most intense competition, low pulp prices and chaotic market conditions. It is not difficult to imagine that losses during that period will more than offset gains during the war period."

Mr. Everest, who completed his second term as president of the American Paper and Pulp Association on February 21st, is no alarmist. He is an experienced and forward looking business man who is merely stating the results of his analysis of the obvious facts.

It is written clearly in today's situation that tomorrow is almost certain to bring economic chaos. When war was declared the British pound was worth around

$4.80. Today it is worth approximately $3.90, a depreciation of 18.75 per cent. The longer the war the lower will be its value in terms of the dollar. When the war ends it will certainly not bounce back to $4.80. Great Britain will want it as low as possible to facilitate exports, especially since she has been able to secure supplies of raw materials under controlled exchange conditions. Normally, the currencies of the Scandinavian countries are tied to the pound because such an arrangement is more profitable in foreign trade than any other. Since last August, for purposes of expediency, the Scandinavian currencies have been pegged to the dollar. We do not know all the reasons but one was obviously the fear of reaction in this country were pulp and paper to be dumped at a further discount of nearly 19 per cent below the already depreciated prices then prevailing.

Everyone recognizes that when the war is over there will be a frantic scramble for trade to rehabilitate war depleted finances. It is logical to assume that the Scandinavian countries will again affiliate their currencies with the pound to obtain trade advantages. This whole problem was simply explained by Walter A. Starr in his article published in the February number.

The problem faced by the members of the American Paper and Pulp Association and the members of the United States Pulp Producers Association is this. Are we going to sit idly by and wait for the inevitable deluge of cheap pulp and paper which will flood our markets unprotected against depreciated currencies?

If we want to continue profitable pulp and paper mill operations in the United States, we had better get busy and close the barn door before the horse is stolen. If no protection is secured the paper manufacturers will be faced with a double problem, a chaotic pulp market and a ruined paper market, for the present duties on imported paper will be woefully inadequate to stem the tide of imports at depreciated currency prices.

Both pulp producers and paper manufacturers have the common problem of market stability. The two markets are interdependent. There must be a stable pulp market before there can be a stable paper market.

Here lies the opportunity for the two associations to work together. It is the most important problem the industries have before them. Legislation is needed badly. Other industries will be ruined also, but the American Paper and Pulp Association and the United States Pulp Producers should jointly take the lead to protect the two industries and their employees.

The horse comes before the cart; pulp comes before paper. The Canadians call their group the Canadian Pulp and Paper Association, but we call ours the American Paper and Pulp Association. Paper has some protection against foreign raiding but pulp has none. Maybe we had better put the horse before the cart or, when the war is over, we won't have either a horse or a cart.

Japan Announces Rayon Pulp Import Quotas for March to June

● From the American Commercial Attache in Tokyo it is learned that the Japanese authorities will allow importation of 43,800 tons of foreign rayon pulp during the period March to June, 1940. The quotas are understood to have been allocated as follows: Canada, 6,000 tons; Finland, 5,200 tons; Norway, 10,100 tons; Sweden, 6,000 tons; and the United States, 16,500 tons. It is also reported that a permit for an additional 3,000 tons from Sweden is contingent upon information as to possibility of delivery.

While the report does not so state the above tons are probably long tons as the Japanese quotas are ordinarily given in tons of 2,240 pounds.

Japanese Rayon Production Down 6% From 1938 Level

● The Rayon Organon states that, "It was recently announced by the Japan Cellulose Industry Reporters, Ltd., that the total output of rayon (yarn plus staple fiber) in Japan for 1939 amounted to 548,850,000 pounds. This figure is 6 per cent below the all time high of 584,600,000 pounds in 1938.

"The production of rayon yarn alone in 1939 amounted to 239,350,000 pounds, which was an increase of 14 per cent above the 209,600,000 pounds produced in 1938 but 28 per cent below the record of 334,350,000 pounds in 1937.

"The 1939 production of rayon staple fiber in Japan approximated 309,500,000 pounds. This figure compares with 375,000,000 pounds produced in 1938, or a decline of 18 per cent," says the Organon. "It is also reported that Japanese production of synthetic fiber from soybeans in 1939 amounted to 1,200,000 pounds. This is the first report we have had from Japan on the production of this new protein type synthetic fiber."

U. S. Rayon Yarn Deliveries Up 16% in Two Months

● "Deliveries of rayon filament yarn to domestic consumers in the short month of February amounted to 29,700,000 pounds as compared with 31,400,000 pounds in January," reports the Rayon Organon. "Deliveries of yarn for the first two months of 1940 have totaled 61,100,000 pounds, which is 16 per cent increase over the 52,800,000 pounds delivered during the corresponding period of 1939.

"Stocks of yarn held by domestic producers at the end of February totaled 8,000,000 pounds, which compares with 7,000,000 pounds last."

Imports of Japanese Staple Fiber Jump in January

● The imports of staple fiber into the United States from Japan in January amounted to 2,334,000 pounds, which was almost equal to the total amount of Japanese staple fiber imported for the entire year 1939.

Kraemer Heads C-Z Service Department

● L. S. Kraemer, formerly assistant to R. W. Parkinson, manager of the service department, Crown Zellerbach Corporation, San Francisco, has been appointed manager of the department, succeeding Mr. Parkinson, who died recently.

Puget Sound Adding New Boiler

● The Puget Sound Pulp & Timber Company at Bellingham, Washington, is currently expanding its steam plant by the addition of a third stirling type boiler for which provision was made in the steam plant built in 1938. The new unit, scheduled to be completed in April, will produce 620 h.p., and will be equipped with the same auxiliary equipment as the two original boilers.

This expansion of steam producing capacity was made necessary by the ability of the mill to average 286 tons of unbleached sulphite pulp per day although designed for but 220 tons daily. Extra steam was needed for cooking and drying.

Western Transportation Buys Historic Stern-Wheeler

● Great publicity throughout the Northwest attended the last trip of the venerable stern-wheeler "Lewiston," making an historic run down the Snake and Columbia Rivers to Vancouver, Washington, early in March.

The "Lewiston" has plied the upper Columbia and Snake Rivers for a number of years and was the last stern-wheeler on the Snake. Bought by the Western Transportation Company, Division of Crown Zellerbach Corporation, the "Lewiston" was brought down the Snake and Columbia through the Bonneville locks to ply between Camas, Washington, and Portland, Oregon, for the rest of her days.

A Routine Test for the Organic Matter in Sulphite Liquors

by CECIL L. TRIPLETT*

At present sulphite cooking liquors are evaluated by determining the total, free and combined sulphur dioxide. In a sulphite system, where liquid and gaseous reliefs from the digesters are returned to the acid supply system, it is possible for organic matter to accumulate in the acid system. The purpose of this paper is to present a routine method for the determination of the organic matter in sulphite liquors. No attempt will be made to show the relation of the organic matter to the quality of the pulp produced.

This work was started in 1938, when for periods of several days' duration the routine chemical analysis of the cooking liquors failed to correlate with the Baume. At these times the chemical tests would indicate a decline in the acid strength; however there would be no corresponding change in the Baume of the acid. Qualitative tests made on samples of the acid indicated large amounts of organic matter.

The Problem

● The only practical method of determining the amount of organic matter present is a wet oxidation. However, the sulphur dioxide present in the acid will consume oxygen the same as will the organic matter. For this reason it is necessary to either oxidize the sulphur dioxide before determining the organic matter or to determine the amount of sulphur dioxide and correct the oxygen consumption for the sulphur dioxide present. The latter method was selected.

The determination of the organic matter is based on two chemical reactions involving potassium iodate as an oxidizing agent. The oxidation of sulphite with iodate was shown to be quantitative by Hendrixson[1]. This reaction is the basis for the determination of the total sulphur dioxide in the Palmrose method of acid testing[2].

Potassium iodate in the presence of slightly diluted sulphuric acid was recommended by Strebinger[3] as a possible method for making quantitative oxidations. Under these conditions no carbon monoxide is formed. Stanek and Nemes[4], working independently of Strebinger, used potassium iodate, in concentrated sulphuric acid, as an oxidizing agent in micro organic analysis.

Later Williams[5], duplicating the work of Strebinger, Stanek and Nemes, found the reactions suitable for quantitative oxidation of most carbon - hydrogen - oxygen compounds.

The determination of the organic number involves the oxidation of only the sulphur dioxide in one sample of liquor; in a duplicate sample all the combustible material is oxidized. The difference in oxygen consumption of the two samples is assumed to be consumed by organic matter. This is not wholly true, since any thiosulphate or similar sulphur compounds present will be included as organic matter. This fact is not a drawback to the usefulness of the test, since the test is used to determine the materials brought into the raw acid system by the liquid relief from the digesters. Any thiosulphates present come from the digester relief.

Method of Anlaysis

● The routine procedure for the determination is short, simple, and can be successfully performed by anyone capable of making a routine acid test.

Reagents and Equipment Needed:
15% Potassium Iodide Solution
N/8 Potassium Iodate
N/8 Sodium Tiosulphate
5 per cent Sodium Bicarbonate
1.25 N Potassium Iodate—73% Sulphuric Acid Solution
Starch Iodide Indicator Solution
Pyrex test tubes 22 mm in diameter and 200 mm long
Glass Beads 5 mm in diameter
Electric Oven, capable of being controlled at 170° C. or a phosphoric acid bath controlled at 170° C.

Preparation of the Potassium Iodate Sulphuric Acid Solution: Place 44.50 grams of chemically pure potassium iodate in a one-liter beaker and add 410 cc of freshly distilled water. Not all of the potassium iodate will dissolve in the water. Slowly add to the contents of the beaker 600 cc of chemically pure sulphuric acid, specific gravity 1.83. The mixture should be stirred continually during the time the acid is being added. Allow the solution to cool to room temperature.

This solution is very hygroscopic, therefore it must be stored so as to eliminate contact with the air. The most convenient method of storing is in a glass, automatic filling, burette, fitted with proper drying tubes to exclude all moisture.

The standardization is accomplished by titrating, with N/8 sodium thiosulphate, the iodine liberated from potassium iodide by a 10 cc sample of the solution. Due to the difficulty of making small adjustments in the concentration of a solution of this type, no attempt is made to correct the strength to exactly 1.25 normal. The number of cc of N/8 sodium thiosulphate required is taken as the standardization constant. This value should be very near 100.

Procedure of Analysis

(1) Pipette a 2 cc sample of the liquor to be analyzed into a 250 cc Erlemeyer flask, containing approximately 55 cc of water and 2 cc of starch iodide indicator.

CECIL L. TRIPLETT,
Hawley Pulp & Paper Company

*Technical Department, Hawley Pulp & Paper Company, Oregon City, Oregon. Presented at the Dinner Meeting sponsored by the Pacific Section of TAPPI and held at the Heathman Hotel, Portland, Oregon, March 5, 1940.

"The organic number procedure is short, simple, accurate, and consumes a minimum of the operator's time," states Mr. Triplett.

"The total elapsed time from the start of the test until results are obtained in from 1¼ to 1½ hours, depending upon the amount of organic matter in the sample being tested. The total of the operator's time consumed by the test is approximately 20 minutes."

(2) Titrate to a starch iodine endpoint with N/8 potassium iodate.

(3) 10 cc of 1.25 N potassium iodate sulphuric acid solution is measured into a test tube. Four or five glass beads are placed in the test tube.

(4) 2 cc of the liquor to be analyzed is pipetted into the test tube. Gently shake the tube to mix the liquids. Carefully wash down the sides of the tube with approximately 15 cc of water.

(5) Place the test tube in the electric oven or phosphoric acid bath, at 170° C. Leave the tube in the oven or bath until the solution is clear. This normally takes approximately 30 to 45 minutes.

(6) When the solution is clear, remove the tube from the oven and allow to cool. Then carefully wash down the sides of the tube and place in the oven or bath until the solution clears. It is necessary to dilute and reheat here to expel the liberated iodine, which has been dissolved in the concentrated sulphuric acid.

(7) When the solution has cleared, the test tube is removed from the oven and allowed to cool to room temperature. This can be accomplished in a shorter time if the test tube is placed in a bath of cold water.

(8) Carefully wash the contents of the test tube, including the glass beads, into a 250 cc Erlemeyer flask containing about 50 cc of water.

(9) Add 15 cc of the 5 per cent sodium bicarbonate solution. This is added to partially neutralize the acid. It also gives an atmosphere of carbon dioxide. Shake the flask well to drive the carbon dioxide from the solution. If the temperature of the solution has risen from the dilution of the acid, the flask should be cooled in a water bath. Otherwise, iodine will be lost when the patassium iodide is added.

(10) Add 10 cc to 15 per cent potassium iodide solution. Titrate the liberated iodine with N/8 sodium thiosulphate, using starch as an indicator. (The starch iodide indicator can be used in the place of the starch.)

Calculations: The total of the cc of N/8 potassium iodide used in the determination of the sulphur dioxide and the cc of N/8 sodium thiosulphate used in the back titration are subtracted from the standardization constant of the potassium iodate sulphuric acid solution. This difference is known as the organic number. It is the cc of N/8 potassium iodate solution consumed by 2 cc of the liquor being analyzed.

Results

● Results obtained on cooking liquor from the sulphite mill have shown organic numbers from 20 to 45. Prior to the completion of the procedure for this analysis, it is certain there were periods when the organic number of the cooking liquor was higher than 45. After the organic number was adopted as a routine control test in the sulphite mill, the organic number of the cooking liquor has been controlled to a maximum value of 35. For the normal condition of the mill, 35 appears to be the maximum value for efficient operation and high pulp quality.

The test has been used on samples taken at regular intervals throughout the entire period of the cook. This work has shown the rate of extraction of organic matter from the chips, the length of the penetration period, the period of greatest digestion, the effect of the variables on the digestion process. In making tests of liquors containing high amounts of organic matter it is necessary to reduce the size of the sample and increase the volume of the potassium iodate sulphuric acid solution used. It is always necessary to use an excess of the oxidizing agent. The maximum organic number for liquor from the digester has been 450.

The results obtained by this procedure correlate very closely with the results obtained using the 0-number procedure developed by Prelinger[6]. The results of the two methods do not give the same values, the organic number being higher than the 0-number, the difference being due to the thiosulphates and similar sulphur compounds present in the liquor. In the 0-number procedure these sulphur compounds are oxidized to sulphates with hydrogen peroxide before the organic matter is oxidized with potassium iodate.

The answer to the question of which value to accept as the correct value for the organic matter hinges on whether the whole molecule of sulphonated lignin is considered as organic matter or just the lignin portion of the molecule classified as organic matter.

Advantages

● The organic number procedure is short, simple, accurate, and consumes a minimum of the operator's time. The total elapsed time from the start of the test until results are obtained in from 1¼ to 1½ hours, depending on the amount of organic matter in the sample being tested. The total of the operator's time consumed by the test is approximately twenty minutes.

Acknowledgment

● The writer is indebted to the management of the Hawley Pulp and Paper Company for the interest shown in attempts to improve the control in the sulphite mill, especially C. E. Braun, Carl Sholdebrand, and F. J. Weleber. Also to Dr. Leo Friedman of Oregon State College for timely advice and encouragement.

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In the discussion following Mr. Triplett's presentation of his paper it was brought out that the amount of organic matter in sulphite waste liquor indicates the rate of hydration of the pulp—the more organic matter in the waste liquor the slower the rate of hydration of the pulp.

Trade Talk

of Those Who Sell Paper in the Western States

Breyman Heads Del Monte Conference

● A particularly interesting Del Monte Conference is being planned this year for May 9, 10 and 11, and an unusual attendance of both merchants and manufacturers is expected to be present, as The National Paper Trade Association is giving special recognition to the 1940 Conference by having authorized its newly elected President, Mr. P. W. Lesh, of the C. P. Lesh Paper Company, Indianapolis, and Mr. Arthur H. Chamberlain, its Executive Secretary, to come to the west coast to attend this annual gathering of the Paper Industry.

E. A. Breyman, vice-president of the Zellerbach Paper Company, San Francisco, is to be chairman of the conference.

Strathmore President to Attend Del Monte Meet

● Amongst those expected to attend the forthcoming paper trade conference at Del Monte in May, is John D. Zink, executive vice-president of the Strathmore Paper Co., West Springfield, Mass.

Leatherman Honored

● J. H. Leatherman, manager of the Sacramento division of Blake, Moffitt & Towne, has been elected chaplain of the Sacramento Order of the Purple Heart.

JAMES C. WHITELAW, Manager Blake, Moffitt & Towne's new Spokane Division announced last month.

Bonestell Named Secretary of San Francisco Group

● H. S. Bonestell, Sr., who last year retired from active management of Bonestell & Co., pioneer San Francisco paper jobbing house, has been chosen Secretary of the Paper Trade Conference, vice Edward L. O'Neil, who resigned early this year.

Mr. Bonestell had been in the paper business for the past 36 years, and celebrated his retirement with a tour of the South Seas, accompanied by Mrs. Bonestell.

However, on his return he found that his host of friends in San Francisco's paper trade, wanted him to take an active part in the industry, and so he was called to take Mr. O'Neil's place.

Mr. Bonestell was trained as a mining engineer at the University of California, but soon gave that up to become associated with the paper firm of his uncle, L. H. Bonestell, of Bonestell, Richardson Co., which had been founded in 1852, and at the time Mr. Bonestell joined it was located on the corner of Sacramento and Sansome streets.

Later the firm became Bonestell & Co., and it is now headed by Mrs. Bonestell's son, H. S., Jr.

Ozzie Doane Joins Seaboard Paper Co.

● Osborne C. "Ozzie" Doane, well known San Francisco paper man, is now associated with the Seaboard Paper Co., San Francisco, according to an announcement by Harry D. Bean, vice-president of the company.

Doane started in the paper business with the Pacific Coast Paper Co., which was then owned by his father, the late Thomas H. Doane, in 1916. The senior Doane sold out his business in 1928, and in 1929 formed the Doane Paper Co., with which Ozzie has been connected to the present time. He also has had paper mill experience in the Middle West.

Ozzie served over seas in World War No. 1 with the navy. He belongs to a number of organizations, and is married, and has two children.

Commercial Paper Adds New Lines

● The Commercial Paper Co., San Francisco, has recently added two new lines, according to Marcus Alter, president.

The lines are Derby Bond, a new product, cockle finish, and air dried; and Featherside Vellum, a deckle-edged announcement paper, both manufactured by the American Writing Paper Co.

S. F. Paper Mill Men Form Association

● San Francisco paper mill representatives are organizing the San Francisco Paper Mill Representatives Association, which will be composed of men representing paper mills, and manufacturers of paper products in the Bay City.

R. A. Gates, manager of the San Francisco office of the Everett Pulp & Paper Co., and chairman of the organization committee states that the purposes of the group will be largely social, enabling the men to get together to discuss their mutual problems, and get to know each other better.

When the association is all organized there will be a regular program of activities and meetings.

Skrivanic Forms New Company

● Frank E. Skrivanic announces the formation of the Paper & Stationery Sales Co. with headquarters at 819 Santee St. in Los Angeles the latter part of January. Mr. Skrivanic prior to the establishment of his new company was sales representative with the Western Paper Converting Co. since 1927.

Paper specialties which the new firm will handle are Oneida Paper Products, manufacturers of all kinds of special bags, glassine, wax and cellophane, Lakeside Central Co., manufacturers of stationery, school and office supplies, and Yankee Paper & Specialty Co., manufacturers of adding machine, teletype rolls and other specialties.

Three Zellerbach Men Passing Cigars

● Old Doc Stork has been busy delivering blessed events to the homes of Zellerbach Paper Company employees. On January 30 a son was born to Mrs. Ray O'Reilly, wife of Ray O'Reilly of the Headquarters Purchasing Division; on January 31 a son, to Mrs. Walter Bacon, wife of Walter Bacon, salesman in the Santa Ana area; and on Valentine's Day, a son to Mrs. Francis Gallagher, wife of Francis "Lefty" Gallagher, of the Oakland Division.

Harrison Promoting Northwest Papers

● John Harrison, sales promotion department of the Northwest Paper Co., Cloquet, Minn., has been out on the Coast working with the company's jobbers' salesmen. At present he is in San Francisco working with the Carter Rice & Company Corporation sales force, and later on he will go to Los Angeles. He also visited Seattle and Portland.

Pell Returns From Guatemalan Trip

● Breath-taking drama photographed in natural color was brought back from Guatemala last month by Rodman C. Pell, Jr., president of the Pelican Paper Company, San Francisco.

Pell has become almost as noted for his jaunts to far-off places, and his interesting moving pictures and lectures as he is for his prominence in San Francisco's paper trade.

He and Mrs. Pell were gone six weeks, and journeyed from San Francisco to Guatemala by rail—a trip of 4900 miles. Pell states that this is the second longest railway journey possible—the longest being the trip from Siberia or Manchukuo to European Russia, via the Trans-Siberian railway.

Pell secured his films at great discomfiture and at times, considerable danger, back-tracking through the Guatemalan jungles where no tourists and few foreigners ever penetrate.

"I have been in many countries all over the world," said Pell, taking pictures, but never, anywhere before, have I seen such masses of color so flamboyant in everyday life, everywhere—be it in clothes or vegetation. Gorgeous tropical flowers bloom everywhere in riotous confusion; and the striking colors of the brilliant, hand-woven clothes of the native women —particularly vivid with scarlets—against the background of blue lake or green jungle, often held us spellbound with their dazzling color contrasts."

Pell will give a series of public lectures, accompanied by his movies, on this latest trip of his.

Zellerbach S. F. Office Publishing Magazine

● The San Francisco Division and Headquarters, Zellerbach Paper Company, put out such an up-and-coming magazine that reports have it that Walter Winchell is out scouting for Polly Kelly and Frank Moon, editor and associate editor, respectively, to sue them for stealing his stuff.

H. S. BONESTELL, SR., Secretary, San Francisco Paper Trade Conference

From Mill Visits

● H. S. Bonestell, Jr., Bonestell & Co., San Francisco paper jobbers, was back at his desk last month after a four weeks' trip during which he covered a lot of territory in the middle west, east and south.

Among the paper manufacturing plants he visited were the Crocker-Burbank Paper Co., Fitchburg, Mass.; DeJonge Coated Paper Co., also at Fitchburg; Gilbert Paper Co., Menasha, Wis.; the Badger Paper Co., Peshtigo, Wis.; and the Miamisburg Paper Co., Miamisburg, Ohio.

Zellerbach Men Win Flying Licenses

● The Sacramento Division of the Zellerbach Paper Company has two pilots who have received their solo licenses—Eddie Morgan, and Wally Cameron. The boys are now working for their commercial pilots' license.

Miss Davis Leaves Strathmore S. F. Office

● Miss Ardith Davis, formerly with Western Newspaper Union, but lately secretary to T. C. Macormack, Pacific Coast representative of the Strathmore Paper Co., West Springfield, Mass., with headquarters in San Francisco, has resigned her position to make her home in Seattle.

Miss Davis' place has been taken by Miss Melba Sanborn, who was formerly connected with the Strathmore Paper Co.

Whitemans Vacationing In Japan

● R. R. Whiteman, manager of the coarse paper department of Blake, Moffitt & Towne, at Los Angeles, is in Japan on an extended vacation trip in celebration of his 25 years of service with his company. Mr. Whiteman is accompanied by Mrs. Khiteman. The trip originally was planned to include visits to various Chinese ports but this part had to be eliminated due to conditions. Mr. and Mrs. Whiteman planned to spend two or three weeks in Japan to return to this country sometime in April.

Smith Back From Mill Visits

● Edward N. Smith of the Edward N. Smith Paper Company, Los Angeles, returned the middle of March from a three weeks' trip east. Mr. Smith flew east and traveled by plane on the major portion of his trip returning by train. He visited with old friends in Chicago, then went on to visit the mills at Middletown, O., Appleton, Greenbay and Rhinelander in Wisconsin. He reported the feeling throughout the east as being optimistic for the current year with mills having a good volume of business on hand. He was very much impressed by the many fine advances noted in the mechanical improvements of the various mills which have added speed as well as increase of production along with marked improvements in quality.

Goldbeck Is Coast Visitor

● W. F. Goldbeck, Hollingsworth & Whitney Company, Chicago office, was a recent Pacific Coast visitor.

Murphy and Buist to Represent Paper Companies

● Gordon Murphy and Norman A. Buist announce their association in representing a group of paper and paper products manufacturers on the Pacific coast beginning February 1. The companies they represent include Fox River Paper Corp., McLaurin-Jones Co., Crocker, Burbank Papers, Inc., Fraser Industries, Inc., and Louis DeJonge Co. Their new offices are located at 106 West Third Street, Los Angeles, Calif.

Mr. Murphy has been active in the paper industry in the west for some time. He served as manager of the printing paper department of the Zellerbach Paper Company in Los Angeles, going from that post to become assistant general manager of the Los Angeles division of the same company. Following this connection he was western sales manager for the Fox River Paper Corp.

Mr. Buist has represented the McLaurin-Jones Co. of Brookfield, Mass., on the Pacific coast for 15 years. In 1935 he associated himself with the Fraser Industries, Inc., whose mills are at Madawaska, Maine. Two years ago he became associated with the Crocker, Burbank Papers Inc., owners of the Louis DeJonge Co., with mills at Fitchburg, Mass.

Mr. Murphy and Mr. Buist left early in February for the National Paper Trade Convention in New York City traveling by way of San Francisco and the Northwest. Following the convention they planned to visit their mills, to return to Los Angeles by the end of February.

Johnsos Now Tackling Paper Problems

● Luke Johnsos, recently appointed sales manager of the Chicago division of the Zellerbach Paper Company, was a former Northwestern University football star, and more recently played professional football with the Chicago Bears. Now he is tackling sales problems exclusively.

E. A. BREYMAN, Chairman Del Monte Paper Conference

Australian Restrictions To Reduce Canadian Exports

● Although British Columbia's log and lumber industries will be drastically affected by Australia's new exchange control laws, newsprint exporters expect that their sales to Australia will continue uninterruptedly except insofar as there may be delays due to shipping shortage.

Because Australia is anxious to maintain its exchange at as high a level as possible during war-time and because its trade balance with Canada is unfavorable, arbitrary reductions in Australia's imports from Canada as well as from other countries are being reduced. The curtailment is expected to be about 60 per cent in the case of lumber and 40 per cent in respect to logs.

Newsprint and pulp are placed on Australia's preferred list, however, inasmuch as their sources of supply of these commodities are limited. The curtailment order was originally to take effect February 1, but it has been postponed until March 1.

Form Sacramento Recreation Club

● The Sacramento Division of the Zellerbach Paper Co. has formed a Recreation Club, and E. B. Morgan was elected president; Rose Pentecost, vice-president; and Wally Cameron, secretary.

Zal Alter Father of Baby Girl

● Zal Alter, vice-president of the Commercial Paper Corporation, San Francisco, was accepting the congratulations of his friends on the birth of a seven-pound, 12-ounce baby girl to Mrs. Alter last month. The newcomer has been named Wendy.

Marcus Alter, president of the company, also came in for congratulations, for this makes him a proud grandfather for the second time.

Doherty and Lambert Take Early Vacation

● Early vacationers of the Zellerbach Paper Company were L. J. Doherty, who spent a restful and quiet time at Palm Springs, and Bill Lambert, seen in San Francisco, far from his Salt Lake abode, on his annual western trip.

Zellerbach Men Win Sales Prizes

● George Schenk of the Los Angeles Division, and Len Landsberger, Fresno Division, Zellerbach Paper Company, won cash prizes in a recent McLaurin-Jones Gummed Paper Specimen contest.

Towne and Jeffries Attended New York Meeting

● Arthur W. Towne, Northern California manager of Blake, Moffitt & Towne, was one of the four Pacific Coast members of the paper trade to attend the National Paper Trade Association convention in New York.

Towne reports that it was a very fine convention, with 325 members in attendance.

He was accompanied on the trip by Frank E. Jeffries, manager of the Tacoma Paper & Stationery Co., Blake, Moffitt & Towne affiliate.

Import Committee Points Danger in Kraft Valuation

The Administration has decided against further appeals of the kraft paper valuation cases in which it has been contended that the proper dutiable home market value of the paper is about one cent per pound higher than the actual export selling price. The importers argue that the Swedish sellers have established such a control over the home market that there is no "freely offered" value on which duty can be collected and that the proper dutiable value is the lower export value. It is because of this claim that the Import Committee of the American Paper Industry is urging that legislation be enacted to prevent such practices by foreign producers by which they avoid the plain intent of the tariff law. If the Government follows the same procedure in several hundred other pending cases, importers of kraft paper for nine years past will recover about $750,000 in duties which they were required to pay before they could begin suit for recovery.

A further result will be the admission of future shipments of Scandinavian kraft at about $4 per ton less than has been paid hitherto. Even without this reduction the actual selling price of the paper before the outbreak of war was below the American cost of production.

There is nothing to indicate what considerations of trade or international policy were involved, or to what extent they may have been instrumental, if at all, in the present decision of the Government to cease further efforts to prosecute these cases.

Davis Heads Recreation Club

● James R. "Jim" Davis is the new president of the Zellerbach Recreation Club, Zellerbach Paper Company, San Francisco. C. R. Brown is vice-president; Dolores McCarthy, secretary; and Phil King, treasurer.

Depreciation Reduces St. Helens' Net for 1939

● Due to larger deductions for depreciation, St. Helens Pulp & Paper Co. reported slightly reduced earnings for 1939. Net profit after all charges including depreciation, and federal income taxes, is reported at $310,405, equal to $1.55 a share on 199,934 shares of capital stock outstanding for the year ended December 31, 1939, compared with $316,970 for the preceding year, equivalent to $1.58 a share on the same number of shares outstanding. Charges for depreciation totaled $220,440 last year, against $184,-823 the preceding period, as increase of $35,617.

Total income before prior charges amounted to $617,329 in 1939, against $592,814 in the preceding year. Sales of the company are not given in the condensed income statement of the company, but it is assumed that they were larger last year in conformity with the trend of the industry.

Balance sheet as of December 31, 1939, shows total current assets of $989,149, including cash of $129,332, and current liabilities of $331,279, leaving working capital of $657,870, and a current position of approximately three to one. A year earlier, current assets totaled $1,-035,330, including cash of $166,008, and current liabilities were $287,806, leaving working capital of $727,524, and a current position of 3.6 to 1. Inventories at year-end amounted to $530,746, compared with $599,210 a year earlier.

All officers were reelected at the annual meeting in Portland, February 20th; Max Oberdorfer, president; Dr. Robert H. Ellis, vice-president; E. S. Collins, chairman of the board; and, Irving T. Rau, secretary-treasurer. Stockholders reelected all directors, who in turn reelected the officers.

Oregon Pulp & Paper Makes Profit in 1939

● The Oregon Pulp & Paper Company with a mill at Salem, Oregon, earned a net profit of $34,916 in 1939 in contrast with a loss of $62,674 in 1938, President F. W. Leadbetter reported at the annual stockholders' meeting at the plant on January 25th.

Net sales for 1939 were $2,618,271, a gain of $609,604. Operations were on a half-time basis during the first eight months of last year but at full capacity during the closing three months, Mr. Leadbetter reported. He told the stockholders that sufficient orders were on hand to make certain of full-time operations for at least 30 days longer. The stockholders reelected the old directors and the latter reelected the old board.

St. Helens Men Enjoy Albany Felt Movie

● Approximately 100 men of the St. Helens Pulp & Paper Company's organization at St. Helens, Oregon, were guests of the Albany Felt Company at a dinner held in that city Thursday evening, March 14th.

The dinner was arranged by Harry H. Stilwell, Albany's Pacific Coast representative. A short entertainment program preceded the showing of Albany's sound moving picture, "The Art of Felt Making." Lowell Thomas serves as narrator of the interesting story which covers the manufacture of paper making felts from the clipping of the wool to the finished felt.

Wherever it has been shown the picture has stimulated discussion of paper maker's felt problems, and the St. Helen's showing was no exception.

Goldsmith Calling On Coast Mills

● P. H. Goldsmith, sales and development engineer of The Pusey and Jones Corporation of Wilmington, Delaware, was a Pacific Coast visitor in March.

Mr. Goldsmith called upon a large proportion of the paper and board mills starting in California and working northward into Washington. Pusey & Jones, who have long been manufacturers of paper mill machinery, are now installing a number of their new stream-flow vats on board machines throughout the country.

Schoenwerk On Periodic Coast Visit

● Otto C. Schoenwerk, consulting pulp and paper mill engineer of Chicago, was a visitor on the Coast early in March. Mr. Schoenwerk, who designed and supervised the building of the Weyerhaeuser Timber Company's pulp mills at Longview and Everett makes regular trips to the Pacific Coast in connection with his consulting work.

Pulp Prices Announced For Second Quarter

● The increases in paper pulp prices for the second quarter of the year as announced by domestic producers proved to be uneven. At the time of going to press two Pacific Coast bleached sulphite producers, Rayonier Incorporated and Soundview Pulp Company, had announced an increase in second quarter basic prices of $1.50 per ton.

The new base price for bleached sulphite is $61.50 per ton of 2,000 pounds delivered at Atlantic ports as compared with $60 for the first quarter. Rayonier also announced for its three higher grades of paper making pulps as follows: Purayonier, $100; Raybrite, $85; and, Rayselect, $64 per ton.

As the supply and demand situation in unbleached sulphite pulp is tighter than in bleached, that grade moved up $2.50 to $5.00. The Puget Sound Pulp & Timber Company, with mills at Bellingham and Anacortes, Washington, announced on March 7th a $5.00 per ton increase making the second quarter price $55 per ton delivered ex dock Atlantic seaboard. This was the only public announcement made, but it was understood in the trade that other unbleached mills were raising the price $2.50 per ton.

These increases in unbleached sulphite, narrowing the margin between bleached and unbleached from $10 per ton down to $9 and $6.50 are in accord with the belief, long held by many in the American pulp industry, that the prices of bleached and unbleached sulphite pulp should move independently of each other according to their respective demands, and that the spread should not be governed by an arbitrary standard such as the cost of bleaching.

The increases are considered sensible in view of the uncertainties of the war's effect on Scandinavian wood pulp exports to this country. No doubt, in view of the present higher prices asked for foreign pulp, the domestic producers could have obtained a greater increase in second quarter prices despite the decline in the ratio of paper production to capacity from 96 per cent in November to 81 per cent for the week ending March 2nd, for the buyers desire to buy American pulp first.

But the policy of self-restraint followed by domestic producers is wise from more than one viewpoint. That which goes up must come down, is a truism applying only too frequently to pulp prices. A smaller rise means a smaller decline later on when the war is ended and pulp from depreciated currency nations again raids the American market. The producers of pulp for market must keep their buyers competitive with the self-contained mills. Therefore the selling price of pulp must not be very much above the cost of production in the self-contained plants.

The prices quoted in New York at present for foreign pulp are as follows: Bleached sulphite, prime quality, $60 to $70 per ton of 2,000 pounds; Easy bleaching sulphite, prime quality, $60 to $65 per ton; Mitscherlich unbleached sulphite, ordinary prime quality, $57 to $60 per ton; Unbleached sulphite, prime strong, $55 to $60; Unbleached sulphite, inferior and semi-prime grades, $52 to $55.

Crown Zellerbach Earnings Show Gain in First 9 Months

● Earnings of Crown Zellerbach Corp. continued to rise in the quarter ended January 31, 1940 (third quarter of the fiscal year) and raised net for the first nine months to the highest for any similar period in the company's history.

For the nine months the company and subsidiaries had consolidated net profit of $5,797,632, after all charges, including depreciation, depletion, interest, income taxes, minority stockholders' interest, as well as provision for a non-recurring loss of $185,345 on revaluation of Crown Zellerbach's equity in net current assets of Pacific Mills, Ltd., Canadian subsidiary, to the equivalent United States dollar value at the current rate of exchange. This is equivalent to $1.68 a share on 2,261,199 shares of common stock outstanding, after dividend requirements on the 529,665 shares of $5 cumulative convertible preferred.

In the like nine months of the preceding fiscal year, the company reported consolidated net profit of $3,484,383, after depreciation, depletion, interest and provision for income taxes and minority stockholders' interest, equivalent, after dividends on the preferred, to 66 cents a share on common.

Sales for the nine months just ended amounted to $41,715,622, compared with $36,140,516 in the corresponding period of the 1938-1939 fiscal year. For the third quarter, however, sales dropped slightly from the preceding three months although remaining substantially above the comparable quarter of last year. Sales were indicated at $13,978,920 for the quarter ended January 31, last, compared with $14,958,079 in the preceding quarter, and $11,415,068 in the three months ended January 31, 1939.

Indicated earnings for the third quarter amounted to $2,134,650, or the equivalent of 65 cents a share on the common. In the preceding quarter indicated earnings were $1,933,108 or 56 cents a share on the common. The three months ended January 31, 1939, showed indicated net profit of $1,145,775 or 22 cents a share on the common after regular preferred dividends.

● On February 23rd the directors of Crown Zellerbach Corporation declared a dividend of 50 cents a share on the $5 per value common stock payable April 1st to stock of record March 13th. This is the final quarter disbursement for the fiscal year ending April 30th and brings total payments for the period to $1 per share compared with 75 cents a share for the preceding fiscal year when there were three disbursements of 12½ cents a share compared with two 12½-cent and one 25-cent previously declared for the 1939-40 period.

Charles M. Server Joins Gillen-Cole Co.

● Charles M. Server, for the past several years Pacific Coast representative of the Appleton Woolen Mills, resigned February 7th to become sales manager for the Gillen-Cole Company of Portland, Oregon.

The Gillen-Cole Company, established in 1900, handles all types of insulations, accousticals, refractories, fire brick, paints and similar lines. Mr. Server expects to add lines of equipment and supplies for the pulp and paper mills in the Northwest.

Plans Under Way for Camas Paper Festival

● The projected paper festival at Camas, Washington, came a step nearer realization on March 7th when a mass meeting of citizens elected a committee of nine to proceed with plans for the celebration.

A three-day celebration has been suggested, with a paper parade, a queen contest, several dances, including a queen's ball, a governor's banquet, a first class carnival and other attractions.

The Crown Willamette Paper Company, Division of Crown Zellerbach Corporation at Camas, through mill manager, J. E. Hanny, has agreed to hold another open house at the mill during the festival.

The festival is tentatively scheduled for August 8, 9 and 10th. The nine directors elected at the mass meeting are: Miss Nora Self, Roy Dobbs, Mayor Woodworth, Paul Millard, B. J. Pillette, Lyall Bolton, W. K. Peery, Art Jones and John Lund.

The Alcoholysis of Wood

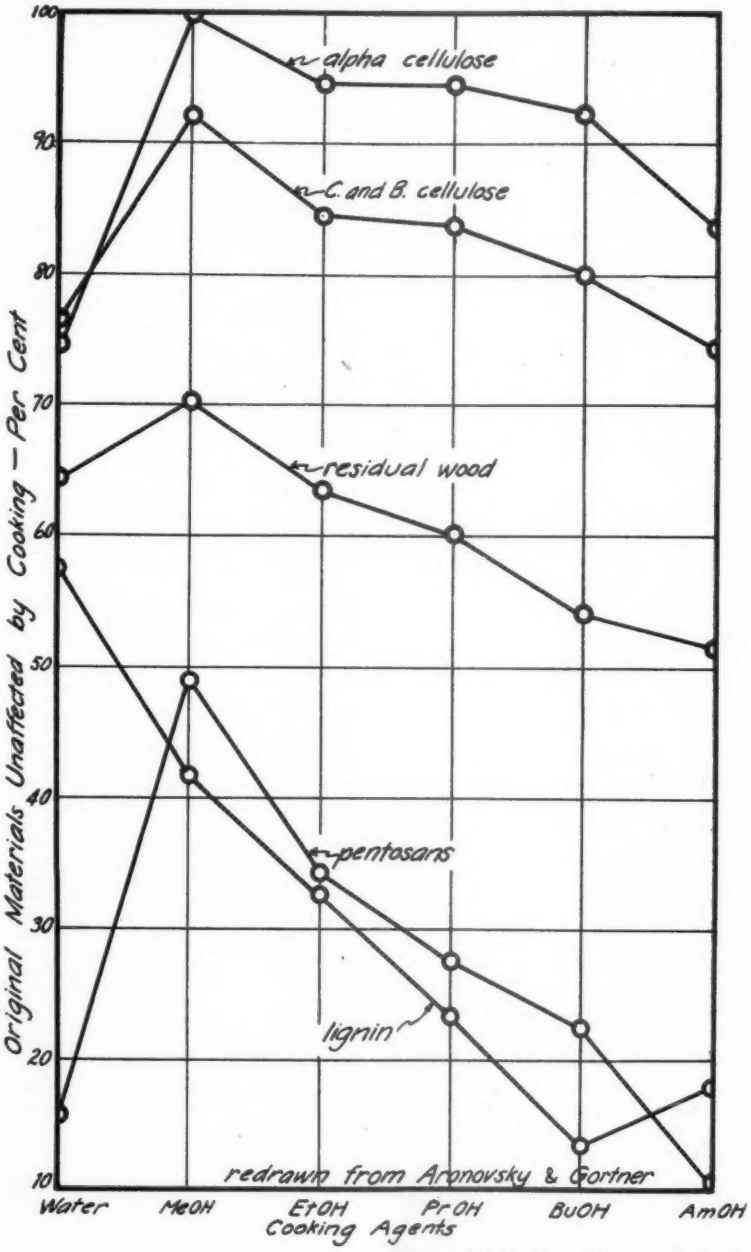
by A. J. BAILEY*

IF one were to digest a mixture of equal parts of starch, creosote oil, and water slowly at atmospheric pressure until it had been reduced to substantially a solid condition, undoubtedly, an extremely complex material would result. Suppose samples were given, for the purpose of separation of components, to an inorganic chemist and an organic chemist, without any hint as to composition or chemical history. It seems likely that the inorganic chemist would attempt acidic and alkaline hydrolysis, chlorination, nitration, oxidation, and similar reactions. The organic chemist would undoubtedly study the solubility behavior of the material in all classes of organic solvents such as alcohol, ether, acetone, benzene, pyridine and similar solvents in addition to the usual reaction solvents.

A parallel to the methods of the inorganic chemist exists in present commercial pulping processes such as alkaline hydrolysis, acid sulfonation, chlorine bleaching, etc., but no analogue exists in any phase of the pulp industry for the solubility methods of the organic chemist. Yet, differential solubility in organic solvents is used in many chemical industries. It does not seem inconceivable that solvent extraction of wood will eventually be used to dissolve all but the cellulose, the lignin will be precipitated to furnish raw material for by-products, and the final liquor will be fermented by specific micro-organisms to obtain the same solvent used originally, to be put back into the chemical cycle, thus producing the digesting agent from the wood itself.

General Development of Pulping Processes

● The usual development of pulping processes progresses through five fairly well defined stages. These are: 1. Selection of the reagent which may be done either on a theoretical or a random basis. 2. Carrying out digestion, maintaining all but one variable constant to find the optimum point of each. These optimum points are found by analysis of pulp to learn the changes which have occurred. 3. Improvements and modifications of process, usually directed by theoretical considerations. 4. Pilot plant stage where laboratory scale is enlarged. 5. Commercial production involving enlarging of pilot plant operation and final adjustment to mill conditions. At the present time, Stage 3 of alcoholic pulping is partly completed and Stage 4 has been studied; Stage 5 is untouched.



Courtesy of Industrial & Engineering Chemistry.

FIGURE 1. Effects of increasing length of carbon chain of normal aliphatic alcohols when digested with aspen wood.

*Acting Director of Cellulose & Lignin Research, University of Washington, Seattle. Presented before the Pacific Section of TAPPI on February 6th, 1940, at Everett, Washington.

History of Butyl Alcohol Pulping

● Stage 1, the selection of the reagent, involves the use of a large number of various alcohols. For reasons, which will be apparent later, the history of only butanol need be reviewed. Hagglund and Urban[3] cooked wood in buytl and amyl alcohols at atmospheric pressure in the presence of acid. Other phases of Stage 1 and Stage 2 were carried out by Aronovsky and Grotner[1]. The most interesting reagents they discovered were the aliphatic alcohols. The relative cooking effectiveness of water and the normal aliphatic alcohols is shown in Fig. 1.

It is to be noted that butyl alcohol produced a residue having the lowest lignin content. By comparing the efficiencies of primary, secondary, and tertiary alcohols they showed that the removal of lignin was a function of the molecular structure of the alcohol. Figure 2 shows the similarity in both yield and lignin contents.

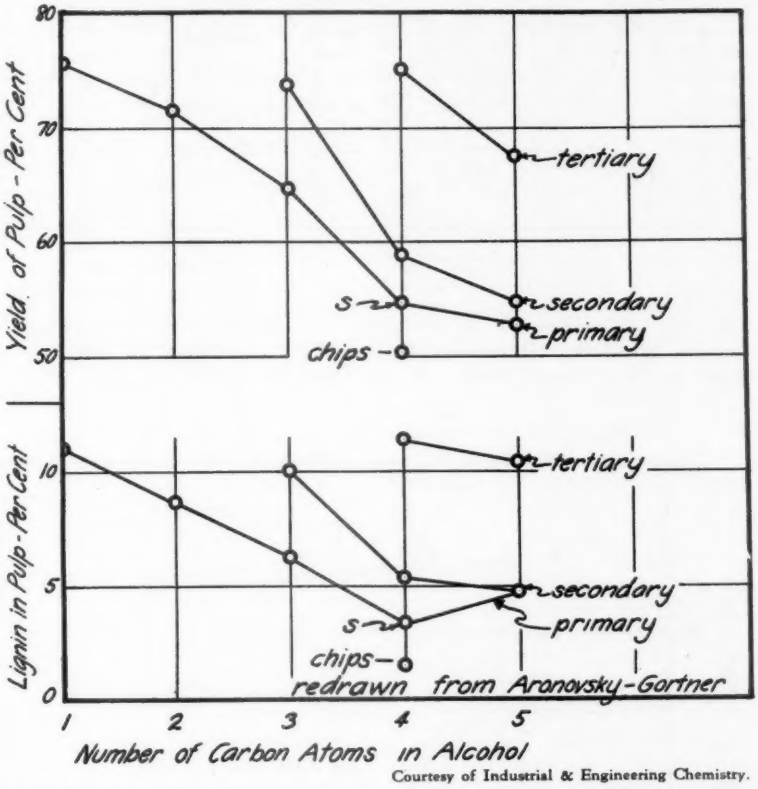
It was shown earlier by Martin and Grotner[4] that the zeta potential at the cellulose-organic liquid interface was a function of molecular length and configuration, butyl alcohol exceeding all other aliphatic alcohols studied (up to and including heptanol), shown graphically in Figure 3.

Another extremely interesting feature demonstrated by Aronovsky and Grotner[1] was that while either water or alcohols alone were poor cooking agents, equal parts of alcohol and water was an excellent cooking agent. With alcohols above propanol, limited solubility in water resulted in a two phase system at room temperature, i.e. two layers: water below and alcohol above. At the cooking temperature, however, the solubility of butanol was such that a homogeneous solution resulted. When this was cooled to room temperature, the layers separated and the lignin was concentrated in the upper, alcoholic layer as shown in Figure 4.

A time of about 4 hours was required to pulp aspen, but the softwoods were not very satisfactorily pulped. McMillen[5] showed that this was true of at least twelve hardwoods. The lignin content of hardwood pulp was easily reduced to less than 5 per cent but the lowest lignin content recorded for a softwood pulp was 17.2 per cent.

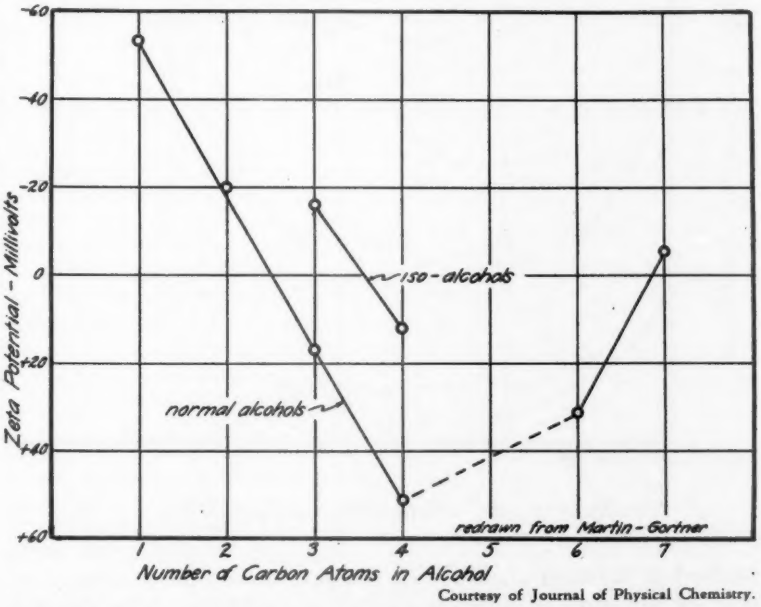
Experimental Work

● Stage 3, concerned with improvements and modifications of processes was confronted with this resistant lignin in softwoods as well as the need for accelerating the pulping. Digestions were carried out on ovendry 40 mesh aspen (**Populus tremuloides Michaux**) and jack pine (**Pinus banksiana Lambert**) using equal volumes of butanol and water in a bronze autoclave of 2 liters capacity. Temperture was maintained at 158° C. throughout and the liquor-wood ratio was usually close to 20 to 1. The time required to establish the



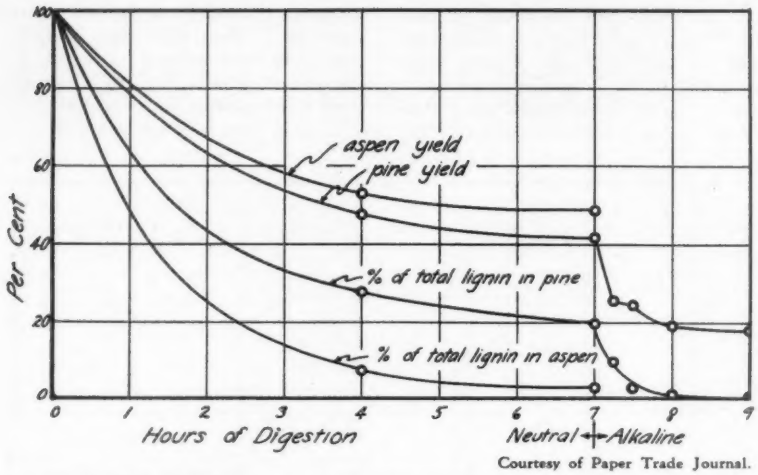
Courtesy of Industrial & Engineering Chemistry.

FIGURE 2. Relation of Molecular structure of aliphatic alcohols on dilignification of aspen.



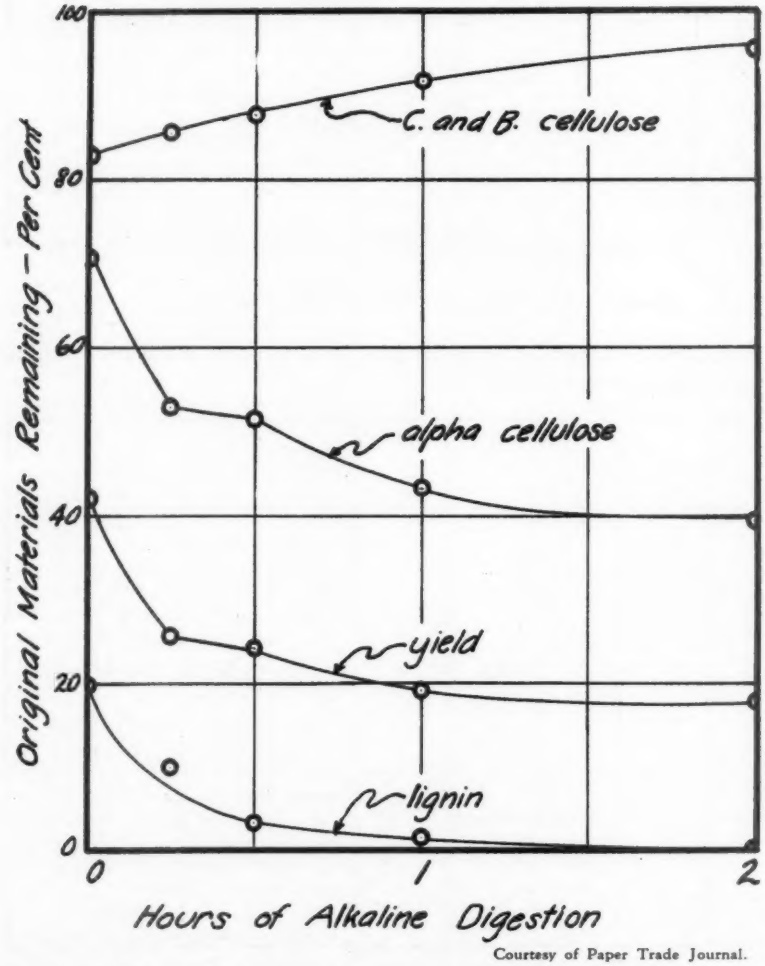
Courtesy of Journal of Physical Chemistry.

FIGURE 3. Zeta potentials of aliphatic alcohol-cellulose interfaces.



Courtesy of Paper Trade Journal.

FIGURE 5. Relation of yield of pulp and lignin content of pulp to time of digestion. All data on the left of the seven-hour ordinate are from neutral cooks; those on the right are from alkaline cooks.



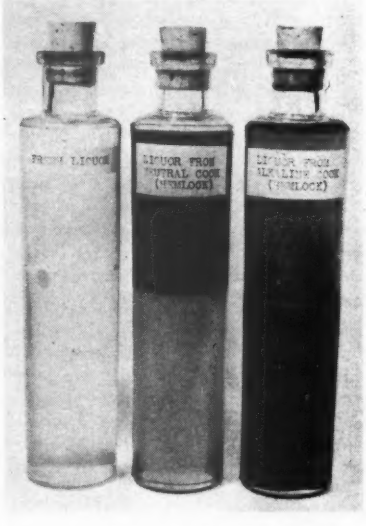
Courtesy of Paper Trade Journal.

FIGURE 6. Effect of alkali on the composition of pine in relation to time of digestion in water-butanol-alkali solutions. This alkaline digestion followed seven hours of neutral digestion.

cooking temperature varied from 10 to 45 minutes and had only a minor influence on results. Cooks were held at pressure for the required time, i: e., 4 hours for a "4 hour cook" and allowed to cool. The pulp was then filtered and washed. The chief variables studied were time, and the kind and concentration of a third member added to the system. The most effective addition as the third member of the system to remove the resistant lignin found in softwoods and to accelerate the delignification reaction was sodium hydroxide. Yields were determined by drying at 105° and weighing, lignin by the method of Ritter and Barbour[6], alpha cellulose by the standard A.C.S. method, Cross and Bevan cellulose by the method of Sieber and Walter[7]. The changes in composition are shown graphically in Figure 5.

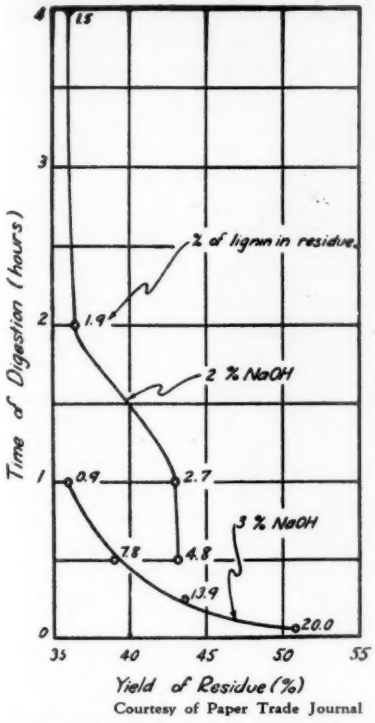
It is to be noted that yields and lignin contents approached limiting values in neutral solutions, and the pine containing the resistant lignin behaved similarly after the solution was made alkaline. A more minute examination of the pine was made by alkalinizing the solution at the beginning of the cook, whereupon all of the lignin was removed very rapidly. The rapid removal of lignin, yield, and other changes in composition by alkaline digestion are shown in Figure 6.

It then became necessary to vary time and alkali concentration, one



Courtesy of Paper Trade Journal.

FIGURE 4. Fresh liquor, liquor from a neutral cook, and liquor from an alkaline cook, from left to right. Note that in the neutral cook the lignin is concentrated in the upper, alcoholic (dark-colored) layer while in the alkaline liquor, the lignin is concentrated in the lower aqueous layer.



Courtesy of Paper Trade Journal

FIGURE 7. Variation in yield and lignin content in relation to alkali concentration and time of digestion of jack pine.

at a time, until the optimum point for each was found. These relationships are shown in Figure 7 in which it appears that a time of one hour, and an alkali concentration of 2 per cent resulting in a lignin content of 2.7 per cent would be satisfactory. An application of the accelerating offect of alkali was also made to aspen; the effects are shown in Fig. 8, which shows that an alkali concentration of 2 per cent gave a yield of 50 per cent of pulp having a lignin content of 1.2 per cent in 15 minutes. Other aspects and exact numerical data are available elsewhere[2].

Objections might logically be advanced that these results were obtained with 40 mesh wood flour rather than chips. Aronovsky and Gortner, however, showed in pilot plant work done on chips that the difference is not important. For example the points marked "chips" in Fig. 2 were identical to the points immediately above (marked "S") except that the "S" points were obobtained from a cook at 174° C. on sawdust while the "chips" points were obtained by cooking at 186° on chips. It is thus apparent that the difference between sawdust and chips is equivalent to only several degrees of temperature. So far as is known, no full plant operation has been carried out.

Summary of Alkaline Butanolysis

● Probably the most important advantage of the process is its rapidity. Aronovsky and Gortner used a temperature of 174° while the above experiments were carried out at 158°. A comparison of cooks at different temperatures, however, shows that an increase in temperature has an extremely important influence in accelerating the delignification. It would appear likely that commercial requirements could be met in 15 minute cooks by merely raising the temperature.

Another inherently valuable feature of the alkaline cooking process is that when the liquor separates into two layers upon cooling, the lignin is concentrated in the water (lower) layer rather than in the alcoholic layer as in neutral digestion as shown in Fig. 4. The principal advantage of this concentration is that the alcohol from an alkaline digestion can be reused directly without any purification. Results of using alcohol obtained by decanting the upper layer and adding to a cook containing no fresh alcohol gave results identical to those made under the same conditions with fresh alcohol. Additional recovery of the alcohol dissolved in the water layer has been obtained.

Aronovsky and Gortner reported that the pulps they obtained by neutral digestion had about the same burst and tear as commercial soda cooks of aspen, but they seemed to be more absorbent, softer, and to hydrate more readily. Judging by the composition of the pulps obtained by alkaline digestion, the properties of aspen pulps should be about the same; the softwood pulps had a composition resembling commercial softwood pulps.

While no complete investigation has been made, it appears that the liquor-wood ratio in alkaline digestion needs to be higher than the usual commercial ratio. This fact coupled with the higher pressure obtaining with the alcoholic liquor than the ordinary cooking liquor at the same temperature, and the rapidity of the process, suggests smaller digesters and countercurrent liquor flow.

The alcoholic liquor is not corrosive, requires no digester lining, does not have a disagreeable odor, but is moderately inflammable at the digestion temperature. Under normal conditions, the cost of butanol is about 55 cents a gallon and it seems likely that recovery better than 99 per cent can be easily and cheaply effected.

Present Status of the Process

● While actual pilot plant testing is needed, the laboratory results point strongly to the efficiency of organic solvents as pulping agents. It would appear that a really intensive study of organic solvents should result in even greater economies of time. Quite aside from its industrial application, butanolysis seems to have unusual promise as a research tool for the study of lignin. Highly purified samples of the isolated lignin represent practically the entire lignin in the wood, are reactive, soluble in a large number of organic solvents, and have other properties favorable to analytical examination. Quantities of butanol lignin from western hemlock have been prepared and purified with the intention of subjecting the material to intensive investigation in the hope of obtaining basic information on the constitution of lignin so that methods of utilization can eventually be turned over to industry in the form of byproduct industries.

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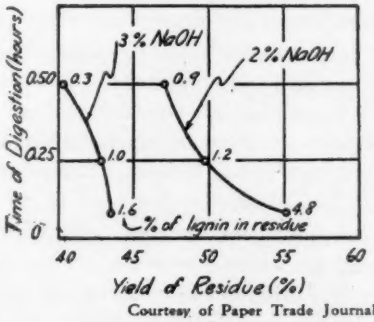
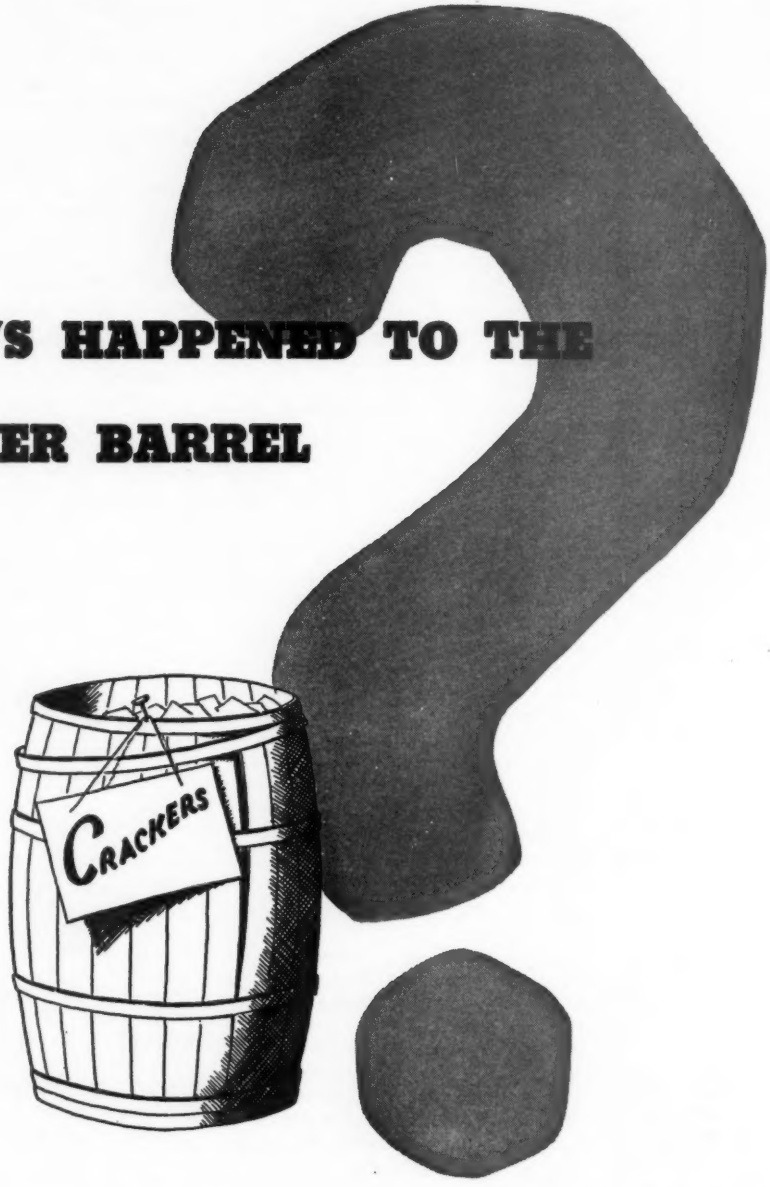


Courtesy of Paper Trade Journal

FIGURE 8. Variation in yield and lignin content in relation to alkali concentration and time of digestion of aspen.

"EVERY PAPER PROBLEM IS A FELT PROBLEM"

WHAT'S HAPPENED TO THE CRACKER BARREL



SOMETHING HAS HAPPENED down at the corner grocery store. No longer does the grocer weigh and sell his crackers and a multitude of other products from barrels, boxes, and other bulk containers. Instead, he now carries much of his stock in attractive, individual paperboard containers, which guarantee freshness, purity, and convenience to him and to his customers.

The great increase in the use of paperboard packaging has created new markets for papermakers and also problems to be solved by both the paper and felt industries. High speed production is necessary to keep costs in line, and this calls for open felts. But cartons of this type are usually printed in two or more colors which requires that the felts impart a high finish to the paperboard.

For 70 years F. C. Huyck & Sons, makers of Kenwood felts, have been helping papermakers to solve such problems—and helping them to get the best results from their own machines. There is a Huyck representative in your territory qualified by training and experience to extend this help to *you*. Call on him at any time—Huyck service is free for the asking.

KENWOOD WOOL PRODUCTS

F. C. HUYCK & SONS · KENWOOD FELTS · ALBANY, N. Y.

Pacific Coast Representatives: Pacific Coast Supply Co., Pittock Block, Portland, Ore.; 708 White Bldg., Seattle, Wash.; 343 Sansome St., San Francisco, Calif.

Jack Johnson Representing Appleton Woolen Mills

● The Appleton Woolen Mills of Appleton, Wisconsin, manufacturers Appleton paper makers' felts, have announced the appointment of Jack E. Johnson as their Pacific Coast representative succeeding Charles E. Server who resigned February 1st to enter business in Portland.

Mr. Johnson, who will begin calling on the mills in a few weeks, is an experienced paper maker. For six years he was general superintendent of the Hawley Pulp & Paper Company and prior to joining Hawley he was a night superintendent for Crown Willamette Paper Company at Camas.

International Pulpwood Granted 1 Year Export Permit

● On February 15th the provincial government of British Columbia renewed for one year the five-year permit granted in 1935 to the International Pulpwood Supply Company to export hogged fuel and chipped wood from Alberni Canal on the west coast of Vancouver Island to the United States.

Ben Larrabee Now Superintendent at Berlin

● Benjamin T. Larrabee was recently made superintendent of The Brown Company's sulphite pulp mill at Berlin, New Hampshire. Mr. Larrabee has many friends on the Coast, having spent several years in this region as superintendent of the Olympic Forest Products Company's mill at Port Angeles and later as superintendent of the Longview mill Pulp Division Weyerhaeuser Timber Company.

He is a past president of the American Pulp & Paper Mill Superintendents Association and was one of the organizers of the Pacific Coast Division.

Box Makers To Meet At Del Monte in June

● The annual convention of the Pacific Coast Paper Box Manufacturers' Association will be held at Hotel Del Monte, Del Monte, California, on Monday, Tuesday and Wednesday, June 24, 25 and 26. The dates and meeting place were recommended by the Administration Committee at a meeting of that body held on January 19th last, and the recommendation was unanimously approved by the board of directors at a subsequent date.

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In accordance with the decision reached at the last convention the banquet and entertainment, which will no doubt be held on Tuesday night, June 25, will be in charge of the Los Angeles members. President T. B. Seebaldt reports that the members of the Southern Division are more keenly interested than ever this year. They have already appointed a committee consisting of Messrs. W. H. Kewell, chairman; Chas. Ruble, H. H. Worth, Roy E. Mullins, along with the wives of these gentlemen, to make the necessary arrangements.

The San Francisco Division will be in charge of all other convention features and committees will be announced as soon as they are appointed.

Finns Lose Five Pulp Paper and Board Mills

● The ceding of territory around Lake Ladoga to Russia by Finland as part of the treaty of peace signed on March 13th between the two countries gave rise to speculation as to what part of her pulp and paper industry Finland had lost.

As nearly as can be determined at this early date, Finland lost five pulp, paper and board mills with an aggregate annual productive capacity of 287,500 metric tons.

This total is made up of 31,000 tons, dry weight, mechanical pulp; 166,000 tons of bleached and unbleached sulphite pulp; 42,000 tons of bleached sulphate pulp; 20,000 tons of news print; 22,000 tons of paper and board (grouped together in the Finnish directory); and 6,500 tons of M. G. sulphite papers.

A comparison of the wood pulp production Finland lost to Russia with that imported into the United States from Finland in 1939 is interesting. Last year the United States imported 185,532 short tons of bleached and unbleached sulphite pulp from Finland while Finland's loss to Russia was capacity to produce 166,000 metric tons annually. Finland lost to Russia 42,000 metric tons of bleached sulphate producing capacity while she exported 8,158 short tons of this grade to the United States in 1939. United States imports of mechanical wood pulp from Finland in 1939 amounted to 37,087 short tons while Finland ceded to Russia productive capacity of 31,000 metric tons of mechanical wood pulp.

Of the five mills located in the territory transferred to Russian control one, Waldhof A. B. at Kexholm (Kakisalmi) on Lake Ladoga, is affiliated with the large German pulp and paper firm of Waldhof Zellstofabrik. The Waldhof mill at Kexholm is rated as having an annual productive capacity of 100,000 metric tons of bleached and unbleached sulphite pulp.

The other four mills in the territory now Russian are: Hackman & Company of Johannes near Viborg or Viipuri. The Hackman pulp mill was built in 1927 and produces around 40,000 metric tons annually of sulphite pulp. The paper mill, built in 1936 manufactures about 5,000 tons of paper and board annually.

The Osakeyhtio Laskela Aktiebolag at Laskela on the north shore of Lake Ladoga has a productive capacity of 20,000 metric tons, dry weight, of white mechanical pulp; 20,000 metric tons of news print; 26,000 metric tons of sulphite pulp, and 6,500 metric tons of M. G. sulphite papers. The sulphite pulp mill was erected in 1926.

Pitkaranta O. Y. is likewise located on the north shore of Lake Ladoga. It was built in 1921, enlarged in 1926 and has an annual capacity of 42,000 metric tons of bleached sulphate pulp.

The Jylhavaara division of The United Paper Mills, Ltd., (Yhtyneet Paperitehtaat Osakeyhtio) is also located on the north shore of Lake Ladoga and produces mechanical pulp and board, 17,000 metric tons of folding box board and paper and 11,000 metric tons, dry weight, of mechanical pulp annually.

The productive capacities given here are taken from the 1939-1940 edition of The Finnish Timber and Paper Calendar.

● The proportion of Finland's pulp production lost to Russia by the peace treaty cannot now be accurately determined. Following is an estimate based upon 1937 production figures published in World Wood Pulp Statistics, issued in September, 1938, by the United States Pulp Producers Association. Metric tons given above have been changed to short tons for comparison with the data given in this report which is in short tons.

Out of a 1937 production of mechanical pulp amounting to 746,529 short tons, Finland lost 34,100 short tons or 4.6 per cent.

Of a 1937 production of sulphite pulps (both bleached and unbleached) totaling 1,150,699 short tons, Finland lost to Russia 182,600 short tons or 15.86 per cent.

From a 1937 total production of bleached sulphate of 64,499 short tons, Finland lost 46,200 short tons or 71.6 per cent.

It should be borne in mind that 1937 figures are for production, while the losses are based upon annual capacity. Rated productive capacity for Finland is not available as a total .

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Camas Paper School Awards Diplomas to 212 Students

• The seventh annual graduation dinner of the Camas Paper School was held in that city the evening of March 7th and 212 students received diplomas from Mill Manager J. E. Hanny of the Crown Willamette Paper Company, Division of Crown Zellerbach Corporation.

Some 275 guests enjoyed the turkey dinner and program at the Crown Willamette Inn. A. G. Natiwick, assistant mill manager and dean of the paper school, served as toastmaster. Speakers were, David J. Goldsmith, secretary of the Crown Zellerbach Corporation of San Francisco, and Dr. Weldon M. Wilson, pastor of the White Temple Baptist Church of Portland.

Mr. Goldsmith's subject was "Modern Pioneering," and he emphasized that cooperation rather than individual effort is the key to modern pioneering in industrial development. Mr. Goldsmith said that inventions today are largely the product of technical men working together in technical laboratories with the best of scientific equipment to aid them. He paid tribute to Mr. Natwick and to W. R. Barber, technical director for Crown Zellerbach who recently received recognition from the National Association of Manufacturers as "Modern Pioneers," for perfecting a process for copperizing pear wraps to prevent rot in storage and shipping. This development, Mr. Goldsmith stated, was a boon to both fruit growers and paper manufacturers; to the growers for it enabled them to broaden their market and lengthen the period of pear selling, and to paper makers through the creation of a new and heavy demand for the pear wrap, thus providing more employment.

Dr. Wilson challenged his audience to aid in the solution of what he considers the three major problems facing the world today; namely, war, unequal distribution of wealth and crime. Through illustrations he brought out the importance of these problems to every individual.

The Camas Paper School conferred a special honorary degree upon O. T. Defieux as Doctor of Philosophy in Power Plant Engineering, in recognition of his service and accomplishments.

Eighty-Two Win First Year Awards

• Diplomas were awarded to 82 members of the first year class. First honors went to E. A. Paul and second honors to George Patterson. Phyllis Patterson had the honor of being the only girl to receive a first year diploma.

Robert Fuller, M. C. Wickstrom and M. M. Graham were given honorable mention. The first year class graduates included:

N. J. Aslin, Everett Arnold, Robert Anderskow, G. E. Best, Charles E. Boucier, Harold Buntz, Robert Botzer, R. A. Butler, W. S. Boutwell (West Linn), Vernon Cox, Floyd Calhoun.

Alfred Calhoun, H. R. Coldfelter and Lewis A. Coleman of West Linn, Woodrow Daly, Clinton Dobson, L. R. Dongan, Sr., C. Esser, Chris Emil, John English, Donald Fifield, Robert Fuller.

Robert Gigler, W. C. Gigler, John Grill, F. R. Gallagher, M. M. Graham (West Linn), Ferald Heriford, Dale Hamilton, Francis Holmes, E. E. Hoffman, Demas Hutchinson, R. W. Hersekorn, Henry Jacobson, R. W. Johnson, R. W. Keller, William G. Keist, Robert Kirkwood, Wallace Kohl.

John A. Liedke, E. W. Lozier (West Linn), Dan G. Meyers, R. L. Miller, Russell Morgan, P. McCreadie, John Martinson, Martin Mockford (West Linn), Charlie Nordstrom, R. N. Payne, R. O. Parsons, F. D. Phillips, John Plankington, George Patterson, Phyllis Patterson, E. A. Paul, Talbert Preuit, V. J. Ross, William Reilly, John Repman, Ed Robertson, John Roberts.

H. K. Roberts, O. W. Robertson, Robert Roberts, L. F. Russell (West Lynn), R. E. Shoemaker, O. R. Sawyer, Frank D. Sill, Guy Stotz, Bert E. Sullivan, W. Scott, Emil Schroeder, Robert Tripp, V. H. Torjuson, Alan F. Tucker, Herbert Westby, Charles Witt, Harry Wohlsein, R. A. Wilkinson, John Winters, M C. Wickstrom (West Linn), Robert E. Wilkins, and Jack A. Ziegler.

Sixty-Nine Awarded Second Year Diplomas

• First honors among the second year graduates went to David R. Cline. F. W. Tietz and L. S. Thompson tied for second honors.

Honorable mention went to L. T. Heinl, Don Wilson and Herbert Wymore. The members of the second year class who received diplomas were:

Arlan Adair, J. Ashbrook, Harvey Blaser, Kenneth Branstiter, Fred Blomenkamp, C. M. Beck, Roy Brown, J. A. Butterick, J. M. Burch, F. J. Bunnell and E. A. Clark of West Linn, C. M. Cline, E. W.. Crisman, L. Dungan, Merl Easton, Carl Genz, Leslie Golladay, Ray Harden, C W. Hansen, Howard Henning.

L. F. Heinl, Ed Hursh and Ed Howard of West Linn, J. A. Hughes, T. M. Hughes, J. W. Holmes, Gordon Junge, Gordon Kinney, David Kline (West Linn), M. C. Lewis, R. E. Lawton, Spencer Lantz, John Lefourneaux, A. J. Lethlean, Philip Luch.

A. R. Lindsley, William Little and O. Lytsell of West Linn, Roy Malcolm, Paul Middlebrook, Dale Merryfield, R. Chas. Meyer, George Nelson, Cliff Parr, S. M. Purdy, Louis Pierson, E. T. Parker, O. J. Perrault, B. Pope and R. K. Pratt of West Linn, Glenn Quail, Harold Roley.

K. Renner and W. Roppel of West Linn, Lear Smith, E. D. Simpson, L. E. Semke, H. B. Scobba, O. Scherpf, C. Sawyer, M. J. Schmid, George Thomas, F. W. Tietz, L. S. Thompson, H. F. Thornton, Donald Wilson, C. V. Ward, Herbert Wymore, and E. C. Wolmutt.

Thirty-Six Given Third Year Diplomas

• R. T. Toby took first place among the 36 third year graduates and received for his fine work a three-volume set of books on pulp and paper making. Lowell Weiler won second honors.

Honorable mention went to Dan Hallock, Chauncey Storms and T. L. Yocum. The following graduated from the third year course:

A. T. Ast, Howard Anderson, Clay Aslin, R. L. Baldwin, E. C. Cooley, Ronald Cory, Rodney Crosby, R. D. Day, William Daly, T. E. Dear.

A. J. Evanger, William Failing, William Fritz, D. E. Hallock, W. W. Hart, Lloyd Hutchinson, F. H. Hammond, Joyce Kendall (West Linn), Jack M. Miller, M. A. Newkirk, R. L. Prentice, W. J. Perrault, Harold Quick, Walter Rich.

George Runquist and Ed Roake of West Linn, Chauncey Storms, W. O. Shadel, Harold Stenehjem, Ralph Seivers, Curtis Sawyer, R. B. Tobey, L. D. Voss, Roy L. Wohlsein, Lowell Weiler and T. L. Yocum.

All Twenty-Four Win Fourth Year Diplomas

The entire fourth year class graduated from the Camas Paper School. This was the first time there were no casualties during the term.

Bruce Dobbs took first honors and J. L. Hays second honors in the fourth year graduating class. For their prizes the two men will receive a week's trip to other Pacific Northwest mills with full pay and all expenses.

Honorable mentions were awarded to Reynold Soderling and Luther Cramer.

The following graduated from the fourth year class: Harry Beauregard, Luther Cramer, Elmer Clark, D. J. Clark, Fred Covell, C. Christiansen, Bruce Dobbs, H. W. Dassel, Marian Edwards, Keith Hill, Virgil Hughes, J. L. Hayes, J. B. Knight, E. C. Lownik, Dorsey Lowther, Raymond Miller, Walter Rains, Reynold Soderlind, Gerald Schmidt, J. M. Turlington, Ray Wadsworth, C. B. Wise, W. E. Wegner and E. D. Vickers.

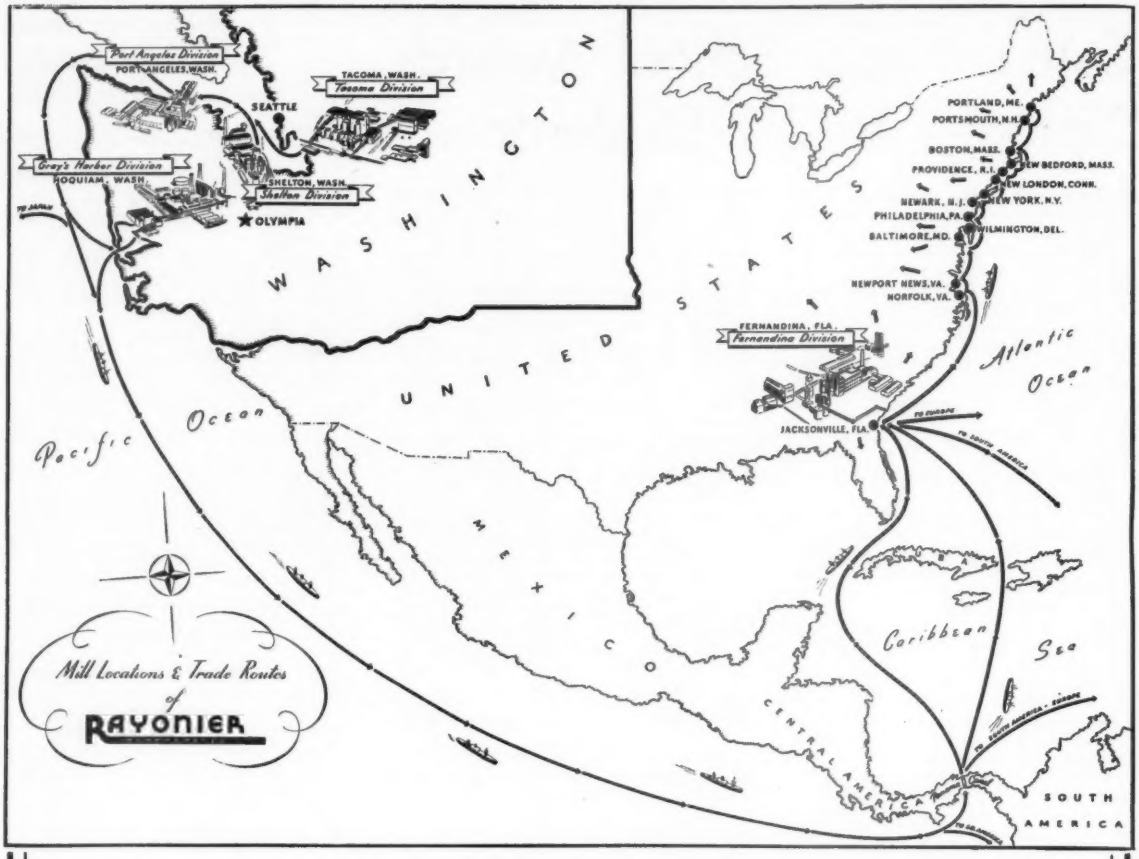
Twenty-three of the men receiving diplomas this year are from the West Linn Division, several are from the headquarters in Portland and the majority are from the Crown Willamette Paper Company Division at Camas.

School Started in 1933

• The Crown Willamette Paper School was started at Camas in 1933. Since then 444 students have graduated from the first year classes; 247 from the second year; 119 from the third year, and 73 from the fourth year course.

Its continued popularity among the employees is best shown by the fact that each graduating class has been larger than the preceding one.

The faculty of the Camas Paper School during the past term was headed by A. G. Natwick as dean. F. A. Olmsted was principal and Clarence Enghouse of West Linn was vice-principal. W. E. Harms served as registrar. G. H. Gallaway, J. H. Hull, O. T. Defieux, Fred Sievers, Paul Millard, Gus Ostenson, Herman Junge and B. Wiedenbaum served as lecturers and instructors.



Rayonier Mill Makes Eastern Debut

Rayonier's newest sulphite pulp mill ushered in the New Year by making its official bow at Fernandina, Florida.

By providing additional tonnage when a threat of wood pulp shortage caused buyers serious concern, Rayonier again demonstrated that it can be relied upon for a *continuous domestic source of supply.*

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Big First Aid Contest Held in Port Angeles

• The most enthusiastic first-aid contest in the history of Pacific Northwest pulp and paper mills was staged in the Elks Temple at Port Angeles on March 7th when five hundred ritizens watched ten "new" teams of first-aid workers from the Washington Pulp & Paper Corporation and Rayonier Incorporated compete.

The aggregate score of the five Rayonier teams was 95 per cent, of the Washington Pulp teams 94.5 per cent.

Highest individual team score was made by Team Number Three of Washington Pulp with 96.5 per cent. Team numbers were: C. Foster, captain; R. Huff, G. Grant, D. Jackson, N. F. Ott, R. Britton and H. Wright, John Monser and John Venables, instructors.

Rayonier teams Number 3 and Number 4 tied for second place with a score of 96.1 per cent each. Team 3 consisted of T. Goin, captain; W. Henry, C. Startup, E. Seastrom, A. Barnes, W. Scrase and L. Nelson. Team 4 included L. Hettman, captain; H. Covington, H. Adolphson, W. Brown, L. Rayburn, J. Farrington and E. Wagner.

Other teams placed in the following order: Rayonier Team 2, Washington Pulp Team 2, Rayonier Team 5, Washington Pulp Team 6, Washington Pulp Team 1, Rayonier Team 1 and Washington Pulp Team 4.

The men of the top three teams received first-aid kits as prizes.

The contest attracted more than ordinary interest due to the fact the seventy men involved had taken volunteer instruction under first-team members and had never before had contest experience.

Fred Pontin, first-air director for the Washington state department of labor and industries, directed the more than 70 men involved in the competition which simulated actual conditions and treatment of patients for certain types of accidents. The recorder was Ralph Lawrence, personnel and safety supervisor of the Fibreboard Products mill. The men were new to first-aid competition and have been studying under direction of "first team" members from the two mills, and the contest was judged by members of these teams.

The first-aid work in the Port Angeles pulp and paper mills is part of the safety program which has been successful in materially reducing the frequency and severity of accidents.

A. W. Berggren and Raymond Dupuis are resident managers of the Rayonier Incorporated and Washington Pulp & Paper Corporation, respectively. Sid Grimes is personnel and safety supervisor of Rayonier Incorporated and Waino Saari is his assistant. E. P. Read is personnel and safety supervisor for Washington Pulp & Paper Corporation. Merle Cashman is his assistant.

Members of the remainder of the teams were:

Rayonier Incorporated:

Instructor, E. A. Florence; captain, V. Mantle; team, H. Eshom, F. R. Harnden, F. N. Capps, L. Mariani, J. R. Conrad, W. E. Gaul, P. Oakes.

Instructor, E Virginia; captain, H. Scott; team, J. Mariani, M. Hodgdon, J. H. Schenefeld, E. Andrus, A. H. Mathews, F. A.. Nansen.

Instructor, H. M. Orem; captain, J. Olsen, team, W. B. Eshom, C. Byrd, P. M. Brown, S. R. Fint, R. Stidworthy, C. R. Winston.

Washington Pulp & Paper Corporation:

Cyril Edmisten and Errett Fleener, instructors; George Ross, Jr., captain; Harvey Harris, Jens Thomassen, Robert Edmisten, Joe Mowbray, Wesley Carling, Merton Goodman.

Harry Iler and Clare McCormick, instructors; Harold Suslick, captain; Darrel Bornstein, William Ticehurst, Mark Cole, William T. Belford, Lloyd Harris, Ray Porter.

Earl Baker and George Hanson, instructors; William Rowland, captain; Charles Lockhard, Robert Moffat, Vernon Phillips, Joe Lonn, Ray King, Charles Hudson.

Cyril Edmisten and Errett Fleener, instructors; Donald Brown, captain; Paul Gillespie, Jim Jacobs, Arthur Tobias, David Fortune, Rufus Beall, C. L. Spicer.

Index of Northwest Materials Free

• "Index of Northwest Materials" will be mailed free each month to business executives, state planners, educators, and others interested in the development of the Pacific Northwest. Requests should be mailed to the Pacific Northwest Research and Traffic Bureau, University of Washington, Seattle.

Titles are included in the index which concern economic conditions, industries, and resources of Idaho, Montana, Oregon, and Washington. Listed are books, pamphlets, magazine articles, and government and municipal documents.

Through this publication, the Bureau plans to aid in the dissemination of factual information concerning this region in order that the resources of the states may be used to better advantage. It is intended, since there is no central point where reference to information of this region is gathered, to make the Bureau a reservoir of material concerning the states of Idaho, Montana, Oregon and Washington.

Earl Thompson Talks To Chemistry Class

• Earl G. Thompson, Pacific Northwest representative of the Great Western Division, The Dow Chemical Company, late in February spoke before Dr. H. K. Benson's class in Industrial Chemistry at the University of Washington.

His subject was, "An Historical Sketch of Great Western's Plant at Pittsburg, California."

Dan Dupuis' Mill Awarded Trophy as Safest in Canada

• Dan Dupuis' friends on the Pacific Coast will be interested to learn that the mill of which he is manager, Ste. Anne Paper Company, Limited, of Beaupre, Quebec, was recently awarded a trophy as the Safest Mill in Canada, having gone 423 days without a single accident.

The Quebec Chronicle Telegraph of February 5th carried the story of this achievement in safety work. The paper said in part:

"Upon the occasion of not having a single accident for 423 days, the Ste. Anne Paper Company, Limited, on February 3rd, received a trophy from the Pulp and Paper Magazine of Canada for the prevention of industrial accidents. The award was made at a smoker held in the mill at Beaupre. Mr. J. N. Stephenson, editor of the magazine, presented the trophy.

"In opening the smoker Mr. D. E. Dupuis, mill manager, said that it gave him great pleasure to welcome the group to Beaupre to celebrate more than a year without a lost time accident. When our mill reopened in September, 1937, said Mr. Dupuis, there were many major alterations to be made before we could actually settle down to satisfactory production. Today we have completed 423 days without a single mishap to mar our record and I am more than delighted to inform you that Mr. Stephenson is with us this evening to present the trophy. At this time, concluded Mr. Dupuis, I would like to thank each and every one of you for your cooperation in our victory."

Guest speakers were the Honorable P. F. Casgrain, speaker of the House of Commons of Ottawa; Jacques Dumoulin, member of the Quebec legislative assembly; and O. E. Sharpe commissioner, Quebec Workmen's Compensation Commission. They extended their congratulations to the men of the Ste. Anne Paper Company, Limited. L. P. Majeau and J. N. Jackson, safety supervisor and secretary respectively, expressed their appreciation of the complete cooperation of all the employees. Boxing and wrestling matches wound up the smoker.

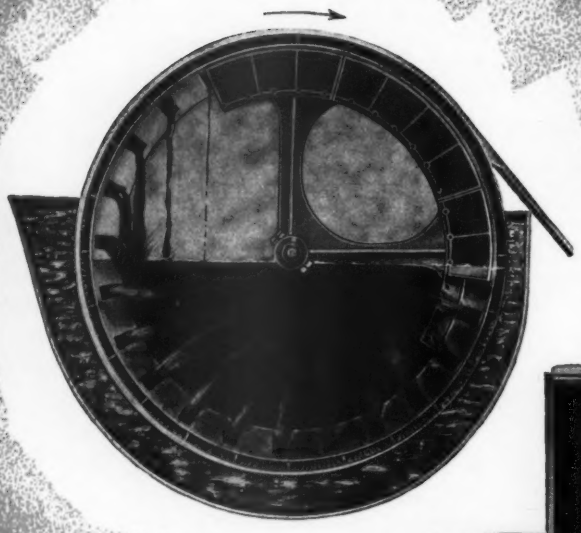
Upon congratulating Mr. Dupuis he replied to Pacific Pulp & Paper Industry saying, "We are all very proud of this record and hope some of the Pacific Coast mills will give us a little competition along this line.

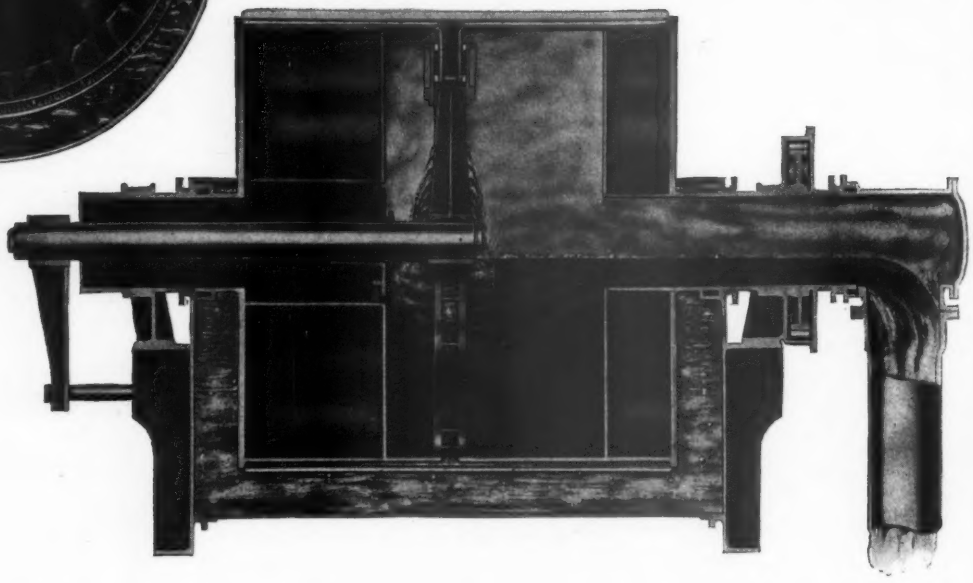
"To date (February 19th) we have gone 440 days without a lost time accident."

At the time he left the Pacific Coast in 1937 for Beaupre, Mr. Dupuis was manager of the Crown Willamette Paper Company, Division of Crown Zellerbach Corporation's sulphite pulp and paper mill at Lebanon, Oregon. Prior to his association with Crown Zellerbach he had served as paper mill superintendent for the Hawley Pulp & Paper Company of Oregon City.

THE OLIVER RING VALVE DECKER

Patents Applied fo





Whatever Volume the Sheet Will Pass This Decker Will Easily Handle

12,000 g.p.m. is the design capacity obtainable with an 8-foot diameter Oliver Ring Valve Decker! A very high capacity, yes, but a study of the two drawings reveals why such a capacity can be a fact. Note the large drainage sections, the large "ring valve" approximating the size of the drum, large discharge ports, and large trunnion. These passageways, with minimum hydraulic restrictions from sheet through trunnion, are evidence of design for new highs in water capacity.

The Oliver design with center drainage from each of the sections, means shortest travel for the liquid, minimum resistance to flow and the vacuum fully effective to the ends of the sections. The simple external valve adjustment and positive vacuum release to atmosphere are additional features. It can be safely said that this Ring Valve Oliver Decker will handle as much liquid as the sheet itself will allow to pass.

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Pacific Straw Litigation Settled Out of Court

● The story of the legal maneuvers involved in settling the ownership and control of the Pacific Straw Paper & Board Company at Longview, Washington, was briefly and effectively outlined by the Oregon Voter in its issue of March 9th. We quote:

"Litigation affecting Pacific Straw & Paper Board Co., Longview, Wn., has been settled and the company now has a chance to pull away from the handicaps in which it has been enmeshed. Settlements were effected "out of court" but were given stamp of legal approval through formal orders signed by Superior Court Judge J. E. Stone at Kelso.

The result is by no means as satisfactory as the much-abused stockholders could have wished but seemingly made the best of a bad situation. The company now has a lease on life and that is something, particularly from viewpoint of the stockholders.

"History of this management-abused company can be outlined here only in briefest form. (Pertinent details were presented in Oregon Voter issues of July 8 and 15, 1939, q.v. A battle for control then began sizzling). Control tentatively rested with the estates of Charles F. Schaub and George Sweet, combined holdings around 316,000 shares of a total of 594,059 shares. Those men had been founders of the company . . . depending wholly on shareholders' money. One of the serious allegations in the situation was that 300,000 shares, or thereabouts, had been issued to President Schaub (indirectly to Sweet) in exchange for formulae of very questionable value, said to have disappeared in course of time.

"Validity of those control shares so secretively issued in earliest history of the company came under challenge last summer. Joe O'Reilly, head of Standard Carton Co. of Tacoma, obtained an option to buy the shares in the estates of the late Messrs. Schaub and Sweet at 10c a share. He then sued for a judgment declaring the shares had been lawfully issued. Among other reasons, this was necessary if the shares were to be released from an existing trusteeship; they were not physically a part of the estates. Meanwhile officers of the company started suit against the Schaub estate, seeking $216,981. All issues were joined in the one suit before Judge Stone. As to the action for recoveries from the Schaub estate it was found at once that this was almost entirely blocked by the time element under the statute of limitations. One of the complaints was that Schaub had converted $36,543 of company funds to his own use.

"In these circumstances it is not surprising that compromise settlements were worked out and all actions dismissed. Judge Stone signed an order approving sale of 180,438 shares of stock belonging to the Schaub estate to Richard S. Munter as trustee, for $19,000. This order had the effect of validating the 300,000 shares of questionable stock. Mrs. Sweet accordingly sold the shares her husband had held to Trustee Munter for reputed price of $12,000. Payments to Mrs. Sweet and to Mrs. Ruth Springer as executrix—chief heir of the $14,730 Schaub estate—are of instalment character.

"In the settlement the company obligated itself to pay Plaintiff O'Reilly $5,000. In return his option to buy the shares was destroyed and his company contracted to purchase all of its paperboard requirements from Pacific Straw Paper & Board. This business is sufficient to constitute a sizable back-log for the manufactory.

"The particularly unsatisfactory feature of the settlement can be guessed by anyone expert in finance or corporate law. It is no criticism of the judge to point out that the company itself should have recovered possession of the 300,000 excess shares. Could the company have arranged to re-acquire those shares for $31,000 the benefits would have accrued to the stockholders, most of whom helped make the company possible with their share subscriptions.

"Directors said the company was helpless, with no possible means of making such a deal. It is more or less harassed by creditors, despite numerous 'stand by' agreements; it had been losing money; it owed past-due payments to RFC; its credit was impaired; it had long been sadly under-financed. Thus the directors and judge consented to purchase of the shares by a third party. Mr. Munter is a Spokane attorney. He served as trustee for undisclosed principals, assumed to be the same as those for whom power-of-attorney shareholder proxies were obtained last year by Frank B. Mitchell, Portland attorney and now president of the company, and E. E. Flood, formerly of Spokane. It is to be regretted, of course, that the opportunity to cut the outstanding share capitalization in half so cheaply had to be passed up, for the present and future. It may be noted that RFC, to which about $90,000 is owed, has been in position to foreclose upon the company should any miscue suggest the wisdom of its doing so. Recovery for the shareholders would be extremely small in event of foreclosure.

"Voting control of the company obviously now reposes with the Munter clients. The general mass of shareholders still compose a minority, whether under any safeguards Voter is not apprised. Those who signed proxy agreements will be bound for more than another year to accept 30c a share for their stock. However, it would be quite an achievement if operating results should in 12 or 15 months give that much of a market value to the shares.

"Directors of Pacific Straw Paper & Board Co. now are Mr. Mitchell, formerly counsel; William F. Lackey, many years an officer and director, and F. S. Scritsmier, Portland. Mr. Scritsmier long has been a broker and consultant in the lumber-logging industry. He knows much also of the paper-board industry and has been given authority over operations of the plant.

"SEC has criticized the reorganizers for not having made public financial and earnings statements . . . a thing Mr. Schaub belligerently refused to do. President Mitchell assures that such statements will soon go out to stockholders for the year 1939. He assures, in fact, that affairs of the company no longer will be kept secret but that shareholders may have full information about the business.

"It is yet too soon to forecast a return to solvency. The company has earned profits in the past—though the shareholders had no evidence of the fact—and showed earning ability even under adverse conditions. Its survival is merited both because of the pay-roll loosed in its community and the field for its excellent products. Business-like conduct of its affairs through the trying months ahead, coupled with forbearance of creditors, perhaps can pull the company through. One of the vital essentials is that it begin to show profits. It would be fatuous for shareholders to expect any part of such profits in the next two or three years. For the present they apparently may feel lucky that an equity is preserved for them."

Puget Sound Reports Good Two Months' Profit

● The Puget Sound Pulp & Timber Company, with unbleached sulphite pulp mills at Bellingham and Anacortes, Washington, reports for the two months ending February 29th a net profit of $161,690, equal after preferred dividend requirements to 54 cents a share on the 251,836 shares of common, against $16,956, or 14 cents a share, on 123,637 shares of par $20 six per cent preferred in the first two months of 1939.

Net profit in February was $84,575, against $77,115 in January this year and $7,356 in February, 1939.

For the year ending December 31, 1939, the Puget Sound Pulp & Timber Company showed a net profit of $80,307 after all charges, including depreciation, income tax, and loss on sale or abandonment of capital assets, equal to 66 cents a share on 123,637 shares of $20 par 6 per cent cumulative preferred stock outstanding. This compares with consolidated net loss of $17,535, as shown in pamphlet report for 1938.

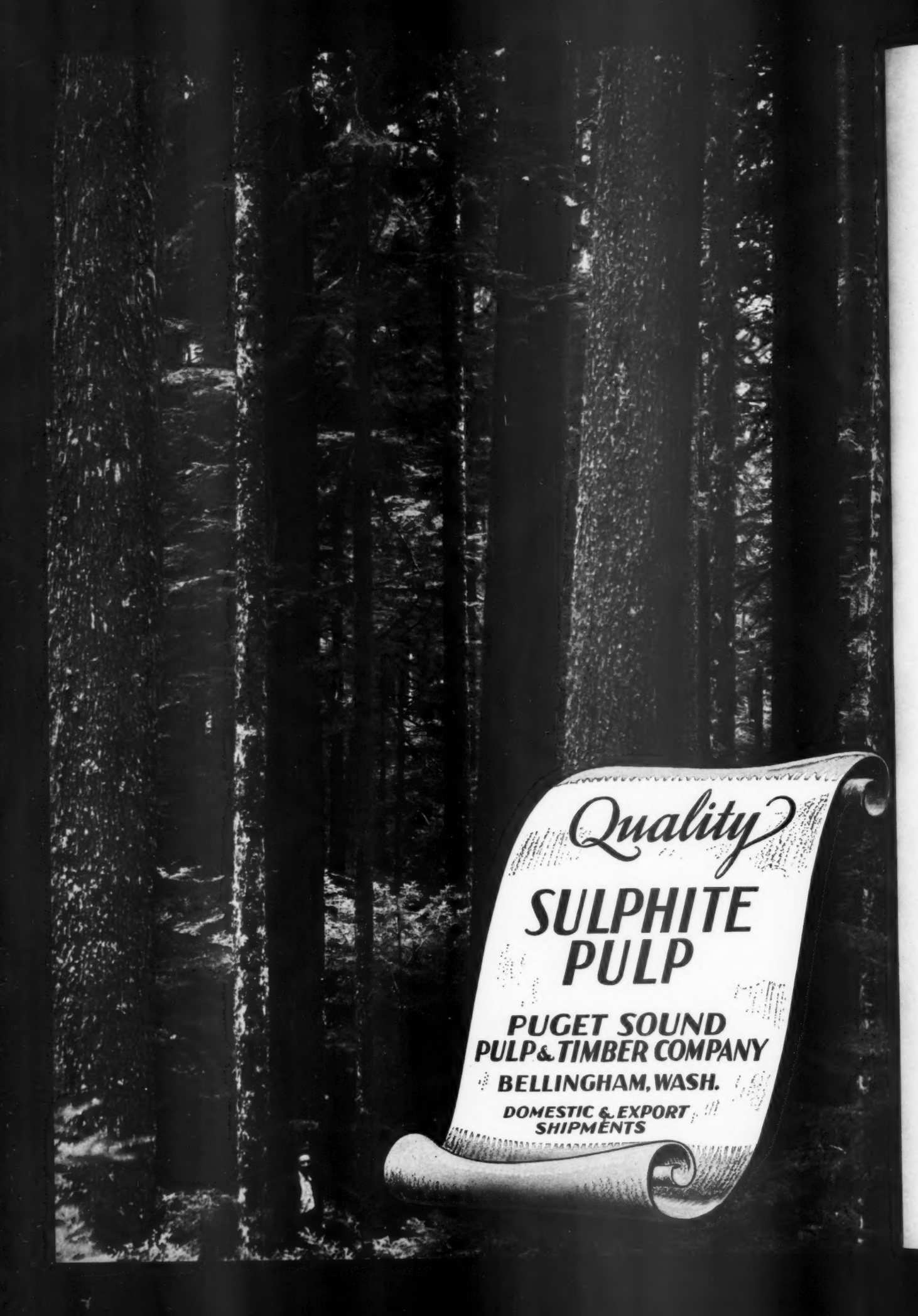
Indicated earnings for the final quarter of 1939 amounted to $77,975, equal to 16 cents a share on the common after provision for preferred dividends, compared with a net profit of $17,153 for the September quarter, equal to 14 cents a share on the preferred.

Most firm contracts expire during the first quarter of 1940, the company reported, and as it has quarterly adjustable contracts booked for the remainder of the year about equal to production capacity, officials state that appearances are that at least the January rate of profit will be realized throughout the entire year. Substantially all current sales are to domestic concerns, although shipments to Japan, resumed in the latter part of 1939, are currently being made at the rate of about 1,500 tons a month.

The Anacortes Mill was reopened during the latter part of 1939, and the year's combined production for Bellingham and Anacortes totaled 94,722 tons. As a result of improvements at Bellingham, production is now running at the rate of 10,177 tons a month, or at the annual rate of approximately 120,000 tons.

As of December 31, 1939, bank loans stood at $100,000, subsequently have been reduced by $50,000.

On January 22nd the directors liquidated all unpaid preferred dividends on the 6 per cent cumulative convertible preferred $20 par stock by the declaration of a dividend of 30 cents a share, payable February 3rd to stock of record January 26th. The payment represented the October 1, 1939, distribution which was deferred. At the same time the directors also declared a dividend of 30 cents a share on the preferred, for the first quarter of 1940, payable February 3rd to stock of record January 26th.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Rayonier Incorporated Reports 9 Months' Profit

● Rayonier Incorporated reported consolidated net profit of $555,041 for the three months ended January 31, 1940 (third quarter of the company's fiscal year), after all charges including depreciation, depletion, and provision for federal income taxes, equal to 88 cents a share on 626,205 shares of cumulative preferred stock outstanding on which dividend arrearages will total $2.50 a share as of April 1, next. This compares with consolidated net profit of $652,635 for the preceding three months ended October 31, 1939, or $1.04 a share on the same basis for the preferred, and with net profit of $1,539,800, or $2.46 a share on the same number of preferred shares, for the quarter ended January 31, 1939.

● For the nine months ended January 31, last, consolidated net profit totaled $1,425,193 after all charges, equal to $2.27 a share on the preferred, compared with $1,421,431 in the comparable period of the preceding fiscal year, equal to $2.26 on the preferred.

"The net results of the operations for the January 31, 1940, quarter, due to certain circumstances, are not directly comparable with those of the preceding quarter or of the corresponding quarter of last year," Edward M. Mills, president, said. "There were increases in the cost of raw materials."

"However," he continued, "the company is now commencing to benefit from higher prices for its products. In November the company's plant at Tacoma was repaired and placed in operation, and early in December the new plant at Fernandina, Fla., was also placed in operation, both of which involved considerable expense to the company. The initial operations of the Fernandina plant, as might be expected, were at a loss. However, all of the plants of the company are now operating on a profitable basis. Four plants in the state of Washington are now operating at a capacity rate and the new plant at Fernandina is approaching capacity production."

Tonnage of all types of pulps, including dissolving, paper grade, and fine paper, totaled 168,890 in the nine months ended January 31, 1940, compared with 100,167 in the like period of the preceding fiscal year. The company sold 75,989 tons of dissolving pulps in the United States during the nine months, as against 34,607 in the like period of the 1938-1939 fiscal year.

Detailed balance sheet did not accompany the letter to stockholders, but Mr. Mills stated that consolidated balance sheet as of January 31, 1940, showed current assets of $6,288,534 and current liabilities of $2,277,742, leaving an excess of current assets over liabilities of $4,010,792 and a current ratio of 2.76 to 1. A year earlier, current assets totaled $7,194,307 and current liabilities $1,841,922, leaving working capital of $5,352,385, and a current ratio of 3.90 to 1.

On February 15th directors of Rayonier Incorporated declared a dividend of 50 cents a share on the $2 cumulative preferred stock payable March 11th to stock of record March 1st. This was the second preferred dividend to be paid by the company since July of 1938. Accumulated arrearage after payment of the dividend declared February 15th totaled $2.50 per share as of April 1st, 1940.

Sumner Iron Works Make Special Rolls

● The Sumner Iron Works of Everett, Washington, is frequently called upon to make special equipment and one of its recent jobs along this line was the manufacture of two sets of smoothing or squeeze rolls for the British Columbia Pulp & Paper Company at Woodfibre, B. C.

One set of rolls had faces 104 inches long and the other faces 114½ inches long. The rolls were made of solid forged steel and were mounted in water chambered bearings having bronze lining on the pressure side and babbitt on the opposite side in caps. The upper rolls are carried on hinged arms and pressure is applied by weights acting through compound levers. Pressure may be varied from 60 pounds to 300 pounds per lineal inch of face through indication marks on the levers. End frames were of heavy H section and the cross ties or spreaders between were of special welded steel construction.

Zellerbach and Loomis Named to Wage Committee

● Two Pacific Coast men, D. J. Zellerbach, president of the Crown Zellerbach Corporation, and Maxwell Loomis of the National Paper Products Company, Division of the Crown Zellerbach Corporation, were named to membership on the national Paper Industry Committee appointed by the Wage and Hour Division, U. S. Department of Labor, pursuant to the Federal Wage and Hour Act.

The first meeting was held in Washington, D. C., on March 18th. The committee will investigate competitive conditions in the industry as defined, which includes the manufacture of pulp, paper and press board, but does not include the making of converted paper products, bags, boxes, etc. The industry as defined employs about 150,000 wage earners. It is estimated that between ten and twelve thousand of these workers are paid less than 40 cents an hour, the highest minimum the committee can recommend.

The industry is carried on in about 750 establishments and its total annual production is valued at about one billion dollars.

The committee has 18 members, equally representative of the employers, the employees and the public. The public membership, in addition to the chairman, is comprised of Henry A. Grady of Newberne, North Carolina, former Superior Court Judge of that state; Wayne Lyman Morse, Dean of the Law School, University of Oregon, Eugene, Oregon; Colonel William J. Wilgus, Director of Military Railways for the United States Army in France during the war; Mrs. Elizabeth Brandeis Raushenbush, economist of the University of Wisconsin; and Sumner H. Slichter, economist of Harvard University.

The employer membership of the committee is comprised of W. J. Alford of the Continental Paper Company, Ridgefield Park, New Jersey; G. Alan Goldsmith of the Mead Corporation, Chillicothe, Ohio; Stuart E. Kay of the International Paper Company, New York; L. J. Parant, St. Croix Paper Company, Woodland, Maine; Dwight Stocker of the Michigan Paper Company, Plainwell, Michigan; and David J. Zellerbach of the Crown Zellerbach Corporation.

The employee membership of the committee is: Frank P. Barry, Albany, New York; Charles O. Dunton, Rumford, Maine; Maxwell Loomis, Port Townsend, Washington; Paul Phillips, Mobile, Alabama; H. W. Sullivan, Washington, D. C.; all of the International Brotherhood of Paper Makers (A. F. of L.) and Ray Thomason, Richmond, Virginia, of the Virginia Industrial Union Council, C.I.O.

In accordance with the directions of the Fair Labor Standards Act, the committee has been appointed with due regard to the geographical regions in which the industry is carried on.

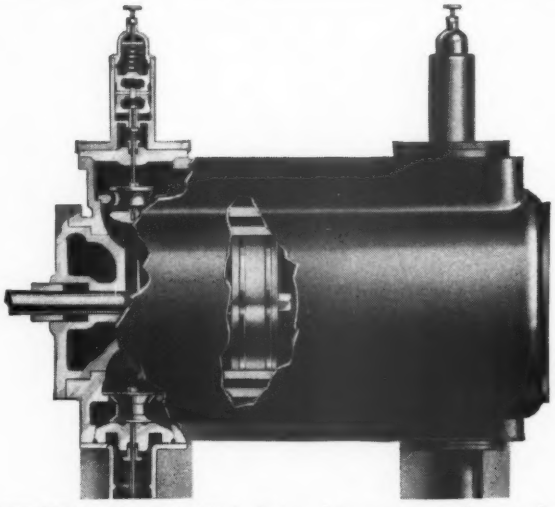
Any recommendation made by the committee will be the subject of a public hearing before the Administrator or his representative at which interested persons may appear in support or opposition.

RAYONIER INCORPORATED'S EXHIBIT at the Waldorf-Astoria during Paper Week, February 19-23, featured the first commercial production of bleached sulphite pulp from southern pine produced by the new Fernandina Division. Newest of Rayonier's paper grade pulps is Raybrite, a pulp of exceptional whiteness and purity. It is employed primarily in the manufacture of high grade writings, covers and papeteries. Other pulp shown include the dissolving grades. Of these Rayaceta for use in manufacturing acetate rayon, is the newest dissolving pulp developed by Rayonier.

Inside the Steam Cylinder...

What oils are best?

There's no quick-and-easy answer to this one, but careful research is producing sound data which cut costs



THE POPPET-VALVE ENGINE is designed to overcome the warping and high friction that high-pressure superheated steam induces in valves of the older types.

Aside from the piston and gears, the long piston rod is the only part requiring lubrication. Whether lubricated by packing glands or by annular grooves in the rod itself, the rod should be lubricated sparingly to avoid carbonizing and valve sticking.

YOU have probably noticed that today's trend in engines is towards higher steam temperatures and higher steam pressures. All of which may be to your advantage—if you have kept yourself adjusted to the rapidly changing requirements in lubrication.

The owner of a steam engine can never let "out of sight" mean "out of mind." Because the moving parts he has to lubricate are always out of sight.

That is one of the two basic reasons why steam-cylinder lubrication is extra difficult. The other, of course, is that the oils are exposed to the action of steam . . . often very wet or highly superheated.

The lubrication industry has considered both these conditions in determining what oils best meet your needs. Today's knowledge has contributed certain lubricants that work effectively within the cylinder. Tomorrow? The study is still going ahead.

SAVING OIL, SPENDING STEAM?

Getting the most from your steam-cylinder lubrication means more than just keeping cylinder walls free from scoring. More than just insuring that valves don't chatter.

These signs, it's true, should indicate that you have no positive lubrication failures. But, of course, it's still possible that you're using more oil than you need for the same results. Furthermore, it's not unheard of to save oil at the expense of steam—and fuel costs money, too!

Any successful approach to selecting the right lubricant for each job involves considering many different phases. To list just a few:

Is your engine the uniflow type or counterflow?

Has it Corliss, piston or poppet valves?

Is your steam wet, dry or superheated? If it's wet, you can't afford to use a straight mineral oil; be sure it's compounded with the correct amount of fatty oils.

Is your operation condensing or non-condensing? This has an important bearing upon your selection of a compounded oil.

WE OFTEN OVERSIMPLIFY

At first glance, it seems simple enough to classify the steam your engine uses as wet, dry or superheated, then apply widely known principles, something like these:

1. **For wet steam with relatively low pressures and temperatures—use a medium-bodied oil to secure proper atomization.**
2. **Superheated steam demands the use of a heavier bodied oil that will withstand the attendant high temperatures and pressures.**

But in the dark interior of that black box, conditions are often less clear-cut. Superheated steam, you say? You mean it's superheated steam *at the throttle*. But in many engines this steam has become wet by the time it reaches the exhaust. In such engines our lubrication men have often restored economy of lubrication by using an oil of medium viscosity, moderately compounded (3% to 5%). It's actual conditions that your lubricants have to meet, not just theories from a textbook.

MORE PURPOSES THAN ONE

In developing and recommending an oil for any steam cylinder, lubrication men are always mindful that it must do two jobs. It's not enough that oil form a lubricating film between two metallic surfaces. Many installations require an oil properly compounded so that oil separation is obtainable to prevent contamination of feed water with consequent boiler failures.

The oil must perform these two vital functions often in the presence of extreme heat, without "distilling down" into carbonaceous deposits . . . and often in the presence of extreme wet-steam conditions.

Shell has kept up with these vital needs under changing conditions. We can almost always improve your steam-cylinder lubrication, provided you give our lubrication man exact data on your engines, together with your particular operating conditions. Our aim is not attained until we find the oil best suited to your needs . . . and this is usually the oil that does the best job with the lowest consumption.

SHELL SHELL *Industrial* LUBRICANTS

Soundview's Profit Reflects Influence of War on Pulp Market

● Soundview Pulp Co. more than doubled its net profit in 1939 over the preceding year on a 41.8 per cent increase in sales, the annual statement shows.

In an independently audited preliminary report, the company and subsidiaries show consolidated net profit of $565,346 for the year ended December 31, 1939, after depreciation, depletion, amortization, interest, and federal income taxes, equal, after dividend requirements on the preferred, to 90 cents a share on 488,250 shares of common outstanding. This compares with consolidated net profit of $268,275 for 1938, equal to 29 cents a common share after regular preferred dividends.

The report for the year just ended comprises income account, balance sheet, and surplus statement as certified by independent auditors. A conventional pamphlet report discussing operations in greater detail and embodying comment by officers of the company will be available at a later date.

Aside from the increase in earnings, progress of the company is reflected in the balance sheet. Funded debt as shown on the year-end statement of 1938, amounting to $162,000, has been liquidated. Long term bank notes totaled $1,040,000 at year-end, compared with $1,300,000 a year earlier, a decrease of $260,000. Notes payable to banks, amounting to $145,000 and carried in current liabilities, showed an increase of $115,000 from the $30,000 on December 31, 1938.

Inventory position of the company was maintained at year-end in conformity with the increased volume of sales characterizing current operations. This item stood at $1,398,906 as of December 31, 1939, a relatively slight change from the $1,385,744 inventory of the like date in the preceding year.

Balance sheet as of December 31, last, shows total current assets of $2,237,549, including cash of $165,931, and current liabilities of $914,335, leaving working capital of $1,323,214 and a current position of 2.44 to 1. A year earlier current assets totaled $1,865,379, including cash of $133,046, and current liabilities were $467,667, leaving working capital of $1,397,712 and a current position of 4 to 1. After payment of $125,931 preferred dividends and $122,063 common dividends, earned surplus increased to $784,401 at the end of last year, from $467,049 at December 31, 1938.

The report of the Soundview Pulp Company states that production for the last year was 116,262 tons, or approximately 70 per cent of capacity. Sales of 122,071 tons during the year reduced inventories by 5,810 tons, leaving an inventory at the year-end of 13,182 tons.

● Commenting upon results for the year, and tracing the trend of operations, Harry H. Fair, chairman, said: "During the first eight months the mill operated at about 55 per cent of capacity with sales in approximate harmony with production. Market prices during that period were unsatisfactorily low, due to a combination of low consumption and severe price cutting by foreign manufacturers made possible by the depreciated exchange value of Scandinavian and Finnish currencies and low preferential ocean freight rates from Baltic ports on foreign ships.

"With the outbreak of the war in Europe in September, there was a sharp improvement in pulp demand, and foreign pulp prices were immediately affected by the increase in cost of production, transportation and war risk insurance which, under the usual form of foreign sales contracts, the purchaser is obligated to pay. Prices firmed and our sales immediately stepped up to production capacity. Our price was advanced $10 per ton January 1, 1940. The market outlook at the moment is for a continued strong demand with strong, and perhaps higher, prices."

Tom Moffitt Back From Eastern Trip

● Thomas E. Moffitt of the Hooker Electrochemical Company, Tacoma, Washington, spent the month of February in the East. Most of the time he was away Mr. Moffitt devoted to work at the company's head office and laboratories at Niagara Falls, New York. Before returning to the Coast he attended the annual meeting of TAPPI in New York, February 20-23rd.

Ernie Ketchum Retires At Powell River

● Ernest P. Ketchum, groundwood superintendent for the Powell River Company of Powell River, B. C., has retired after 28 years of service with the company. Prior to joining the Powell River organization almost at its beginning, he worked for other mill organizations on the Pacific Coast.

Penn Salt Offers Chlorine Handling Chart

● The Pennsylvania Salt Manufacturing Company of Washington, Tacoma, Washington, has recently issued a liquid chlorine wall placard which covers the usage and handling of liquid chlorine. Easy to follow safety recommendations are given on the chart.

The placard is 19½ by 14 inches, illustrated in color and strongly backed with canvas for permanent usefulness.

It is given free to chlorine users who will write to the Penn Salt Company.

Camas Further Expanding Bag Storage Facilities

● Late in February work started on another addition, four stories high, 176 feet long and 42 feet in width, to the bag storage building at the Camas, Washington, mill of the Crown Willamette Paper Company, Division of Crown Zellerbach Corporation. The new building which will add on to the unit completed last fall will provide 29,600 square feet of floor space. The first two floors are of concrete construction while the third and fourth are of wood mill type construction.

When completed the new building will allow ample storage for taking care of fluctuations between sales of finished bags and production of bag paper, and will relieve the present congestion in the basement of the bag factory. The completion of the construction program will provide a bag storage unit 400 feet in length, 42 feet in width and four stories high.

Hawley Profit Shows Big Gain in 1939

● Independently audited report of Hawley Pulp & Paper Co. for the year ended December 31, 1939, shows net profit of $236,431 after all charges, including depreciation, amortization and federal income taxes. This compares with net profit on the same basis of $87,701 for the preceding year, and with net of $145,432 for 1937. Profit of the company is not available for dividends under terms of the 1934 reorganization indenture.

Paralleling the trend in the industry, net sales for last year amounted to $3,637,916, compared with $3,053,071 in 1938. Sales, however, did not reach the 1937 level, when volume aggregated $3,783,192. Profit on sales amounted to $1,004,134 last year, as against $693,951 in 1938, and $792,417 in 1937.

Balance sheet of the company as of December 31, 1939, shows total current assets of $1,254,721, including cash of $163,568, compared with current liabilities of $504,791. A year earlier, current assets aggregated $1,128,415, including cash of $54,281, while current liabilities were $368,359. Inventories, carried at the lower of cost or market, totaled $695,406 at year-end, compared with $661,826 on December 31, 1938.

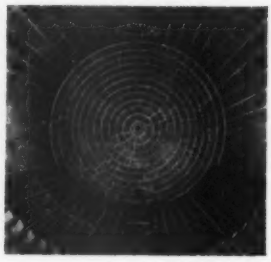
Major Watson Eastman, president, told bond and stockholders in his annual report that, "Assuming a continuation of profitable operations throughout 1940, it is the company's intention to call all bonds which may be outstanding on January 1, 1941, as the call price for such bonds decline $25 per $1,000 on that date. In addition, the company is advertising for tender of bonds to be opened March 19, 1940, in compliance with the provisions of our reorganization indenture."

The Hawley Pulp & Paper Company had an operating deficit at December 31, 1938, of $460,464.29, which sum was reduced by the deduction of net profit and profit on purchase of its own bonds to $221,175.84 at December 31, 1939.

Sheehy Joins TAPPI

● James T. Sheey, assistant chief chemist, Rayonier Incorporated, Fernandina Division, Fernandina, Florida, recently joined TAPPI.

Mr. Sheehy is a 1932 graduate in chemical engineering from the University of Washington in Seattle.



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CELLULOSE PURIFICATION EQUIPMENT

Al Hooker In Demand As Preparedness Speaker

● For the past several months Albert H. Hooker, western sales manager of the Hooker Electrochemical Company of Tacoma, and major in the Chemical Warfare Service reserves, has been much in demand as a speaker on the army's program of industrial preparedness. Major Hooker has spoken before a number of Northwest civic organizations, at schools and colleges and over the radio.

Last November he reported for a short period of active duty with the army, attending the Army Industrial Congress in Washington and there learned of the plans prepared for immediate industrial mobilization in case the United States is called upon to defend itself.

In his talks Major Hooker has pointed out that the chaos and confusion coincident with this country's entry into the World War was because of an inadequate program. Since 1920, however, the war department has been working on a program of industrial mobilization. "While no one wants or expects that the United States will be involved in another war," said Major Hooker, "nevertheless officials believe in preparedness and have a definite program all ready to place in operation upon a moment's notice."

Major Hooker stated in his talks that 60 per cent of the essentials of the army can be supplied by industries now supplying peace-time products.

However, in case of war these plants will immediately be turned over to the production of war needs and will be paid the cost of production plus a 3 to 5 per cent profit, he said. Under the program, an army of four million men, completely equipped, could be put on the field in six months, as items that require a longer period for production are already made and being held in reserve, he added.

Major Hooker briefly outlined the setup of the army department from the Secretary of War on down to the officers and privates, stating that there are now 400,000 trained men in the service in addition to enough reserves for the immediate mobilization of four million men.

Any fears of his listeners were put to rest when he said that while the army is probably inadequate now, it is being built up rapidly at present, and that the navy is the best in the world in his estimation. Also comforting was the statement that the United States is practically independent financially and economically and has 45 per cent of the world's wealth. Furthermore, it is not very vulnerable as it is bounded by friendly neighbors on the North and South and by wide oceans on the east and west.

Major Hooker recently returned from a trip by air from Los Angeles to New York via Central and South America. He reached New York 29 days after leaving Los Angeles, visiting 14 countries and covering more than 11,000 miles.

Walt Salmonson Has Baby Daughter

● A bit late we report that Walter Salmonson, son of S. A. Salmonson, assistant superintendent of the Soundview Pulp Company, and Washington representative for the Simonds-Worden-White Company, passed the cigars December 14th upon the birth of an 8-pound 12½-ounce baby daughter to Mrs. Salmonson. The young lady was named Karen.

Walter Hodges Back From Long Trip

● Walter S. Hodges of Portland, Oregon, representative of a number of prominent pulp and paper mill supplies manufacturers, left the Coast January 7th and returned more than a month later after visiting the head offices of his accounts.

Mr. Hodges' itinerary included the Appleton Wire Works at Appelton, Wisconsin; Orr Felt & Blanket Company at Piqua, Ohio; Asten-Hill Manufacturing Company in Philadelphia; American Wringer Company's plants at Woonsocket, R. I., and Valleyfield, Quebec; Penman's Limited at Ottawa and Capital Wire Cloth Company, Ltd., at St. Hyacinth, Quebec.

He stopped in Montreal to attend the annual meeting of the Canadian Pulp & Paper Association late in January.

Rayonier Changes Pulp Names

● Rayonier Incorporated, with headquarters in San Francisco and general sales offices in New York, recently announced the following changes in the names of their paper grades of wood pulp.

Olympic Hi-White was changed to Raybrite; Grays Harbor Bond to Raybond; Grays Harbor Select to Rayselect; Olympic Standard to Raybook; and, B-700 to Raywhite.

Rayonier manufactures four types of dissolving pulps: Purayonier, Hicolor, Rayonier and Cellunier.

MARCH *brings winds*
. . . springtime . . . **TAXES**

Our TAXES—in the last ten years — practically have been multiplied by three, yet our RATES have been reduced 19%.

Our POLICY — through 55 years of operation—has been to give you the maximum amount of electric service for your electric dollar.

Buy more electricity—and pay less per kilowatt hour!

PUGET SOUND POWER & LIGHT COMPANY

Camas Men Win Foremen's Prize Contest

● In a recent essay contest among foremen held by the Crown Zellerbach Corporation, and Rayonier Incorporated six Camas men took six out of the eight prizes.

Out of a total of 85 essays submitted by foremen, Paul Millard of Camas and W. R. Benson of Carthage, New York tied for first place. Each received $50 in cash. The two essays were so good that the judges, unable to decide between them, decided to award equal prizes to each.

Second prize went to Jack Savage of the Camas mill who received $20. The next three awards were won by Gordon Atkins, William Ashe and C. J. Beaver who each received $10. First honorable mention went to D. F. Murchison of Rayonier Incorporated, Grays Harbor Division.

The essays were restricted to 750 words on the subject, "What Can a Foreman Do to Build High Morale in His Department." Judges were A. B. Martin of San Francisco, executive vice-president of Crown Zellerbach Corporation; Albert Bankus, vice-president of Crown Zellerbach; E. W. Erickson, manager of the National Paper Products Company Division at Port Townsend; and George Cropper, manager Rayonier Incorporated, Shelton Division.

Forty-five of the eighty-five entrants were foremen of the Camas mill. The winning essays will be printed in booklet form and distributed to all foremen in the two organizations.

Harry Field Writes History of Lindsay Wires

● "The Lindsay Wire Weaving Company—Its First 36 Years," is the title of a well written interesting booklet recently published in Cleveland, Ohio. The author, Harry H. Field, treasurer of the company, has devoted a large part of his time since his voluntary retirement in February, 1939, to writing the history of the company.

In 40 pages Mr. Field traces the progress of the Lindsay organization from its one building, six loom beginnings to its present eight buildings and 64 looms with their capacity 16 times that of the original facilities. Copies may be obtained from the Lindsay Wire Weaving Company, Cleveland, Ohio.

Camas Mill Draws Large Number High School Graduates

● A vocational survey completed in February by Miss Nora Self of Camas disclosed the fact that of 205 students graduating from Camas high school in the past three years 75 are working in the pulp and paper mill of the Crown Willamette Paper Company, Division of Crown Zellerbach Corporation. Thirty-four are taking work in high education. Four are doing post graduate work in high school and seven are in business college.

Of the 205 graduates 27 are out of work the survey reveals. Fifteen boys are unemployed, including 7 on NYA and three working on their fathers' farms for lack of work elsewhere. Of the girls 12 are out of work including 3 on NYA.

The survey also showed that the girl graduates generally do not marry their classmates. Of the 106 girls 21 per cent are married. While colleges and normal schools took 22 boys only 12 girls went away to school. Seven went to business college and one took post graduate work.

Occupations of students working elsewhere than in the mill range from housework for girls and farm work for boys to clerking, enlistment in the navy, forestry service, truck driving, office work, and in one case, playing major league baseball.

WANTED

Two experienced newsprint machine tenders as "trainers" for new mill in Australia. Salary 520 pounds a year. Also want three back tenders or spare machine tenders to whom machine tender positions at seven pounds weekly, plus overtime, will be given within three months if service is satisfactory.

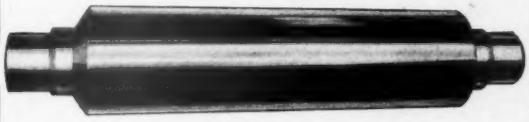
Full time employment offered on weekly wage for minimum two-year contract, paid annual holidays, transportation provided including wife and children. Married men 27 to 35 years of age preferred.

Give all details of your experience, positions, duration of same, your photograph, and also names for our reference, in first letter to E.W.G.C., GEORGIA HOTEL, VANCOUVER, B. C.

FARREL

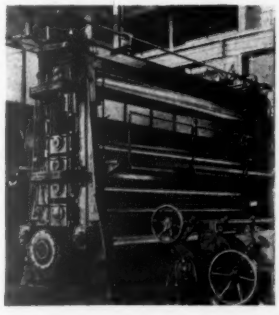
Rolls - Calenders

Are Important Aids to Fine Paper Making



On the quality of the calendar rolls depends to a considerable degree the quality of paper produced. If the rolls are smoothly finished, with accurate bodies and journals, if their crown is scientifically correct in shape and amount and if hardness and depth of chilled body surfaces are uniform, a manufacturing pre-requisite to top-quality paper production has been met.

All these qualities are found in Farrel Rolls. The results are evidenced not only in quality of production but in the long-lived, trouble-free performance and low maintenance cost of Farrel Rolls. They are made in chilled iron or extra hard "Farreloy," with any diameter from 4″ to 72″, any face length up to 312″.



Farrel Calender Stacks are precision-built for dependability and operating convenience, equipped with such improved features as automatic, gravity-feed lubrication, floor-operated electric lift and heavy, box-type housings.

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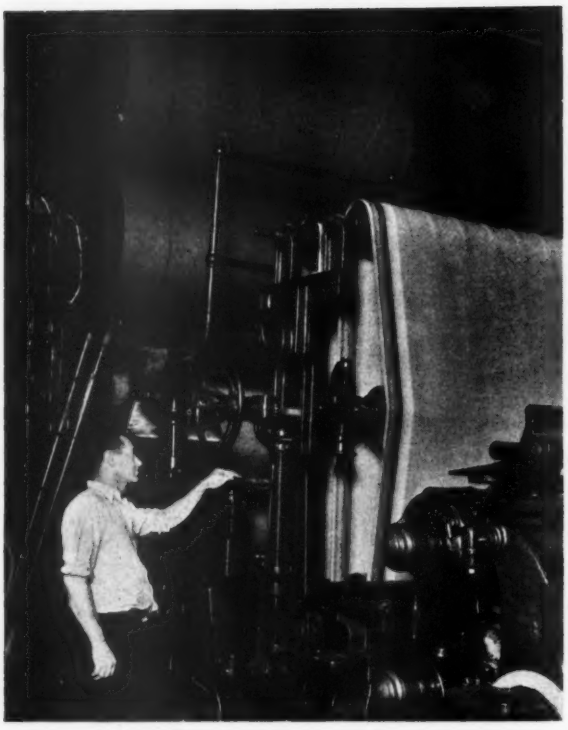

MORE SPEED WITH LESS BROKE

The speed of any paper machine is determined by the condition of the web at the wet end. Unless the excess water has been extracted thoroughly and uniformly by the felt and press, breakage is bound to occur. The higher the speed the greater the "broke" and the lower the output. Hence the importance of the wet felts. Hamilton Felts are built for high speed. The experience of more than eighty years governs the selection and weaving of the fleeces that enter into their manufacture. Hamilton Felts are uniform and consequently they remove water uniformly. They are unusually strong. This combination of strength and uniformity makes them last longer.

From the thinnest tissue to the heaviest board, there is a Hamilton Felt that will do your work better, faster and at lower cost.

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Miami Woolen Mills. *Established 1858*

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National Paper Dyes

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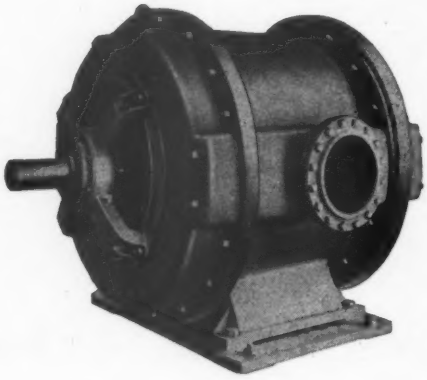

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INDEX OF ADVERTISERS

A
Albany Felt Co. Inside Back Cover
American Potash & Chemical Co. 43
Appleton Wire Works 43
Appleton Woolen Mills 46

B
Bagley & Sewall Co. 46
Bauer Brothers Co. 46
Black Clawson Co. 30
Bulkley Dunton Pulp Co. 4

C
Cavin, Marshall & Barr 47
Chromium Corp. of America 47

D
Draper Brothers Co. 45
Drew & Hoffman 46
Du Pont de Nemours & Co., E. I. 2

E
Eastwood Nealley Corp. 48
Edison Storage Battery Co. 45
Electric Steel Foundry Co. 44

F
Ferguson & Co., Hardy S. 47
Freeport Sulphur Co. 48

G
Gillen-Cole Co. 46
Great Western Division The Dow Chemical Co. 3

H
Hardy, George F. 47
Hodges, Walter S. 45
Hooker Electrochemical Co. 44
Huyck & Sons, F. C. 28

L
Lindsay Wire Weaving Co. 45
Lockport Felt Co. 44

M
Merrick Scale Mfg. Co. 46

N
Nash Engineering Co. 48
National Aniline & Chemical Co. 43
Northwest Filter Co. 46
Northwest Lead Co. 47
Norton Co., The 1

O
Oliver United Filters, Inc. 34

P
Pacific Coast Supply Co. 41
Perkins-Goodwin Co. 47
Puget Sound Power & Light Co. 40
Puget Sound Pulp & Timber Co. 36
Pulp Bleaching Co. 40
Pusey & Jones Corp. Outside Back Cover

R
Rayonier Incorporated 32
Roche Harbor Lime & Cement Co. 47
Ross Engineering Corp., J. O. 46

S
Schoenwerk, O. C. 47
Selden, Stanley 47
Shartle Brothers Machine Co. 30
Shell Oil Co. 38
Shuler & Benninghofen 42
Stebbins Engineering Corp. 40
Stetson-Ross Machine Co. 47

W
Waterbury & Sons Co., H. 46
Western Gear Works 47
Weyerhaeuser Timber Co., Pulp Division Inside Front Cover